NOTE VII.

ZOOLOGICAL RESULTS OF THE DUTCH SCIENTIFIC EXPEDITION TO CENTRAL BORNEO.

THE BIRDS

BY

Dr. J. BÜTTIKOFER.

(Plates 13—15).

When writing my introduction to Dr. Jentink's treatise on the Mammals collected during my sojourn in Borneo (N. L. M. XIX (1897), pp. 1—26), I had no idea that the publication of the present paper, which at that time was nearly ready for the press, would have to undergo such a long delay. But the duties of my new position as Director of the Zoological Garden at Rotterdam absorbed so much of my time that I could not think much about finishing my manuscript. And even now I am, for want of time, unable to do what I originally had proposed myself to do, i. e. to give a critical review of the birds of Borneo, but must content myself with an enumeration of the species obtained by myself and my companions, especially by my assistant Mr. Max Moret, who, after my return to Europe, made a small collection of birds in the surroundings of Pontianak near the west coast, and of Dr. A. W. Nieuwenhuis [1]), who, from May 1896 to May 1897 and from November 1898 to March 1899, made collections of birds on the Upper Kapoeas [1]) and on the River Mahakkam (East-Borneo) and its tributaries.

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[1]) See my above-mentioned introduction, p. 25, and a paper from the hand of Dr. Jentink's on the Mammals collected on this second expedition by Dr. Nieuwenhuis (N. L. M. XX (1898), p. 113).

Moreover I am indebted to Mr. L. Westenenk, an officer in the Dutch colonial civil service, at that time »Assistent Resident" at Sanggau,. for a small collection of birds preserved in spirits, from the junction of the Sekajam with the Kapoeas River and sent to me after my return to Leyden.

In my above-mentioned introduction [2]) I have plainly sketched the oro- and hydrographical conditions of the country as well as its climate and vegetation, factors which are of great influence upon the ornis of the explored territory, so that I hardly need to add any more particulars to it.

At the same place I called attention to the lack of water-birds in my collection, due to my neglecting to spend some time in the coast-region, and the small collection made by Mr. Moret at Pontianak has not added an important number of species of water-birds.

The bird-collections made by Dr. Nieuwenhuis, also enumerated in the present paper [3]), contain among the 815

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1) The letters „oe" in Dutch geographical names ought to be pronounced as „uh".

2) Since the publication of this introduction, in which I enumerated (p. 1) the publications on various parts of the zoological collections of our expedition, the following papers on this subject have been published in the Notes from the Leyden Museum:

M. M. Schepman, description of a new *Unio* from Borneo. Vol. XX, p. 92 (pl. 1).

Dr. O. Finsch, on the specific distinction of the Ground-Cuckoos of Borneo and Sumatra. Vol. XX, pp. 93—96.

Dr. F. A. Jentink, the Mammals, collected by Dr. Nieuwenhuis on his second expedition to Borneo. Vol. XX, pp. 113—125 (pl. 2).

Dr. J. G. de Man, Crustaceans of the Dutch Borneo-Expedition, part I. *Macroura*. Vol. XX, pp. 137—161 (plates 6, 7 and 8); — id., part II. *Brachyura*. Vol. XXI, pp. 53—144 (plates 5—12).

Dr. R. Horst, on the variability of characters in Perichaetidae. Vol. XX, p. 206.

3) These important collections, as well as mine, have kindly been presented to the Leyden Museum by the „Maatschappij ter bevordering van het natuurkundig onderzoek der Nederlandsche Koloniën."

specimens, representing 165 species, only 26 species which were not stated by myself from the western side of the watershed, and none were obtained which most likely would not occur in the Kapoeas-basin as well.

With such a great number of species, this collection is quite sufficient to state that east from the watershed the ornis does not show any essential difference from that of the Kapoeas-region. It may now, as I already suggested in my introduction to the enumeration of the mammals, be considered as a matter of fact that the homogenity of the ornis of Borneo is extremely great throughout the vast island, especially as far as the lowland up to an altitude of 1000 meter is concerned.

The region of the Upper Kapoeas having previously been entirely unexplored, I expected to obtain a number of new species, especially in the mountain-forests, but although I worked very hard in collecting as many interesting species as possible, paying special attention to the smaller and more unobvious forms, there is not a single really new form among the 269 species collected, and only two species (*Harpactes orrhophaeus* and *Cyanoderma poliogaster*), already known from other islands or from the Continent, were obtained which had not been recorded before from Borneo.

These facts are pleading very strongly for the perseverance and the great success with which the Kina Balu and the mountainous interior of Sarawak have been explored by energetic naturalists as Whitehead, Everett and Hose, who added so many new species, especially mountain forms, that we were not able to enrich this great number with a single new species.

The specimens treated of in the present paper, have been collected in the following localities and on the following dates [1]).

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[1]) As to the geographical position of these localities see the map in the above-mentioned introduction.

A. COLLECTION BÜTTIKOFER.

Poetoes Sibau Nos 1—11 (November 29th—December 1st 1893).

Smitau Nos 12—131 (December 6th—17th 1893).

Roema Manocal (foot of Mount Kenepai) Nos 132—354 (December 21st 1893—January 12th 1894).

Mount Kenepai (Station 550 meter above the level of the sea) Nos 355—616 (January 14th—February 1st 1894).

Sinlai River (near Nanga Raoen, Mandai Valley) Nos 617—629 (March 7th—12th 1894).

Mount Liang Koeboeng (780—1135 meter above the level of the sea) Nos 630—1176 (March 13th—May 3rd 1894).

Nanga Raoen (a Dyak village in the Mandai Valley) Nos 1177—1325 (May 8th—22nd 1894).

Poelau (on the Sibau River, a northern tributary of the Upper Kapoeas) Nos 1326—1500 (May 31st—July 9th 1894).

B. COLLECTION MORET.

Pontianak (near the west-coast) Nos 1501—1574 (Dec. 7th 1894—Febr. 18th 1895).

C. COLLECTION WESTENENK.

Sanggau (at the junction of the Sekajam with the Kapoeas River) Nos 1601—1702, all in spirits (second half of 1894).

D. COLLECTION SCHAEDLER.

A collection of 26 specimens (Nos 1701—1726) made by Mr. Schädler, a friend of Mr. Moret, at Pontianak during the winter 1895—96, also enumerated in the present paper.

E. COLLECTION NIEUWENHUIS.

(This collection was made with the aid of his assistant F. Freiherr von Berchtold).

Poctoes Sibau Nos 1—25 (May 16th—June 9th 1896).

Long Bloe River (a southern tributary of the Upper Mahakkam) Nos 26—81 (September 10th—October 26th 1896); Nos 94—98 (November 12th—23rd 1896); Nos 121—127 (December 10th—20th 1896); Nos 138—145 (January 26th—May 10th 1897).

Bruny River (a southern tributary of the Long Bloe River) Nos 99—116 (November 27th—December 16th 1896); Nos 128—137 (January 16th—25th 1897).

Lower Mahakkam River Nos 146—174 (May 10th—25th 1897).

This collection was accompanied by a journal from the hand of Mr. von Berchtold, with a number of interesting field-notes which are made use of in the present paper, with the exception of the vernacular names. These latter, as a rule, have not the value ascribed to by several authors, as they very often are untrustworthy and misleading. It happens not seldom that one and the same name is bestowed upon several species (manau tana = ground-bird on all the species of *Pitta* and some other terrestrial birds) or that quite different names, even in the same places and by the same people, are in use for one and the same species.

A very large and important bird-collection has been made by Dr. Nieuwenhuis on his second voyage on the Upper Mahakkam from November 20th 1898 to March 1st 1899. This collection arrived in the Leyden Museum a week ago and was enregistered in the present paper after this latter was made ready for the press. The collection contains 658 specimens representing 141 species, ten of which had not been represented in our previous collections.

Dr. Nieuwenhuis having meanwhile undertaken a new expedition in East-Borneo, this time more to the north, we may hope that he will be able to continue his collecting work in a territory which is zoologically still quite unknown, and that his new collections will strongly increase our knowledge of the ornis of the island, though we may not expect many forms not stated already from Central-Borneo.

For conveniances sake I have adopted in the present list, with but a few exceptions, the systematical arrangement used by Count Salvadori in his »Catalogo sistematico degli Uccelli di Borneo", published in »Annali del Museo Civico di Storia Naturale di Genova, 1874", which excellent work, treating of 392 species, may still be considered the most important publication on this subject [1]).

Another review of the birds of Borneo, enumerating 472 species, has been published by Dr. Vorderman under the title: »Liste des Oiseaux de Borneo" in Natuurkundig Tijdschrift van Nederlandsch Indië, Vol. XLVI, afl. 3 (1887).

A very important review of the birds of Borneo, worked up to date, is A. H. Everett's »List of the Birds of the Bornean Group of Islands" in the Journal of the Straits Branch Royal Asiatic Society, 1889, pp. 91—212, with map [2]). This list treats of not less than 570 species, a good number of which however are restricted to the island of Palawan, an island which cannot readily be understood as belonging to the »Bornean group of Islands". Since the issue of this useful publication, very successful explorations have been made by Mr. Charles Hose and also by Mr. Everett in the Baram valley and the mountainous interior of Sarawak. Especially in this latter region the work of these indefatigable explorers was crowned with enormous success, especially with regard to the great number of new species discovered in the dense and inaccessable mountain-forests (Mount Penrisen, Mount Kalulong, Mount Mulu, Mount Dulit and other mountains with an elevation of more than 1000 meter above the level of the sea).

As I already pointed to in my above-mentioned introduction, I was able to state some of those special moun-

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1) This work is quoted in the following list under the abbreviated form of „Salvad. Ucc. Born."

2) Quoted hereafter as „Everett, L. B. Born."

tain-forms, such as *Calyptomena Hosei*, *Cyanops monticola*, *Malacopteron kalulongae*, *Rhinomyias ruficrissa*, *Mesolophus* (*Rubigula*) *montis*, *Hemixus connectens*, *Staphidia Everetti*, *Turdinulus exsul* and others in the forests of Mount Kenepai and Liang Koeboeng, and we may be quite sure now that this special ornis of this more elevated zone of Borneo is quite the same on all the mountains of the island, and that these special forms are represented by closely allied forms on the mountains of Malacca, Sumatra and Java.

Falconidae.

1. *Microhierax fringillarius.*

Falco fringillaris Drap. Dict. Class. d'Hist. Nat. VI, p. 412, pl. V (1824).
Hierax coerulescens Salvad. Ucc. Born. p. 3.
Microhierax coerulescens Everett, L. B. Born. p. 185.

Three specimens from Smitau, another from the Mendalam River (Dr. Nieuwenhuis) and another from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99). — Iris, bill and feet black.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

2. *Polioaetus ichthyaetus.*

Falco ichthyaetus Horsf. Trans. Linn. Soc. XIII, p. 136 (1822).
Poliaetus ichthyaetus Salvad. Ucc. Born. p. 6; Sharpe, Ibis 1889, p. 73; Everett, L. B. Born. p. 183.

Two adult females from the Sibau River. — Iris chrome-yellow, bill leaden blue, cere lemon yellow, inside of mouth pale flesh-color, feet bluish gray.

Hab. South-eastern Asia and the Sunda Islands (Celebes included).

Annotations of Mr. von Berchtold: »Ein gewandter und scheuer Vogel. Sein Gesicht und Gehör sind sehr scharf, der Flug leicht, doch wenn es sein muss, schnell, gewöhnlich aber langsam. Das schneckenförmige Steigen und das Schweben ohne sichtbare Körperbewegung bietet ein schönes Schauspiel. Den grössten Theil des Tages ruht er auf einem grossen Baume in der Nähe des Flussufers, wo er auch die Nacht zubringt, einsam und ungesellig. Seine Nahrung besteht hauptsächlich aus Fischen. Da am frühen Morgen die Fische sich mehr in der Tiefe aufhalten und erst später an die Oberfläche kommen, scheint dieser Vogel die Jagd erst spät zu beginnen und demzufolge lange zu schlafen".

3. *Polioaetus humilis.*

Falco humilis Müll. & Schleg. Verh. Nat. Gesch. Zool. Aves, p. 47, pl. 6 (1839—44).

Polioaetus humilis Salvad. Ucc. Born. p. 6; Everett, L. B. Born. p. 183.

An adult female from Nanga Raoen and two males and a female from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99). — Iris yellowish white, bill horny blue, tip black, feet bluish white.

Hab. Malay Peninsula, Sumatra, Borneo and Celebes.

4. *Spilornis bacha.*

Falco bacha Daud. Traité d'Orn. II, p. 43 (1800).

Spilornis bacha Salvad. Ucc. Born. p. 7; Sharpe, Ibis 1889, p. 71; Everett, L. B. Born. p. 182.

Spilornis pallidus Wald. Ibis 1872, p. 363; Sharpe, Ibis 1889, p. 72; Everett, L. B. Born. p. 182.

An adult male from Mount Kenepai and another from the Bruny River (Upper Mahakkam). — Iris orange-yellow, bill blue, cere and bare space on the face chrome-yellow, feet orange-yellow. Wing 14 inches. — Contents of the crop: Locusts, of the stomach: a Snake.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

After having compared our two specimens with those from different localities in the Leyden Museum and with the numerous specimens from Java, contained in the Collection of Dr. Vorderman, I am unable to recognize *Sp. pallidus* Walden as a distinct species. Amongst the specimens from Java there are some which by no means could be considered to be anything but *Sp. pallidus*, while this species, according to the opinion of all recent ornithologists, is restricted to Borneo.

5. *Baza borneensis.*

Baza Jerdoni Salvad. (nec Blyth) Ucc. Born. p. 11; Everett, L. B. Born. p. 184.
Baza borneensis Brüggemann, Abh. Nat. Ver. Brem. V (1878), p. 47 (nom. nud.); Sharpe, Ibis 1893, p. 557 (description of the types).
Baza magnirostris Schleg. Ois. Ind. Néerl., Accipitres, p. 75, pl. 28, fig. 5; id. Mus. P. B. Revue Accipitres, p. 135 (1873).

An adult male from Poelau. — Iris orange-yellow, bill and cere black, lower mandible blue, feet orange-yellow.

Hab. Borneo.

The present specimen as well as that from Borneo, mentioned by Schlegel as *B. magnirostris*, agree fully with the description given by Sharpe.

6. *Haliastur intermedius.*

Haliastur intermedius Gurney, Ibis 1865, p. 28; Sharpe, Ibis 1889, p. 74, Everett, L. B. Born. p. 183.
Haliastur indus Salvad. Ucc. Born. p. 12.

Two adult males from the Sibau River and a female from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99). — Iris in one specimen pale brown, in the other chrome-yellow; bill pale bluish green, paler at the tip, cere and feet sulphur-yellow.

Hab. South-eastern corner of Asia and the Sunda Islands.

7. *Spizaetus alboniger.*

Nisaetus alboniger Blyth, Journ. As. Soc. Beng. XIV, p. 173 (1845).
Spizaetus alboniger Salvad. Ucc. Born. p. 14; Everett, L. B. Born. p. 181.

An adult female from Roema Manoeal. — Iris yellow, bill black, feet yellow.

Hab. Malacca, Nias and Borneo.

8. *Ninox scutulata.*

Strix scutulata Raffl. Trans. Linn. Soc. XIII, p. 280 (1822).
Strix hirsuta Temm. Pl. Col. I, pl. 289.
Ninox scutulata Sharpe, Cat. B. Br. Mus. II, p. 156; Everett, L. B. Born. p. 179.
Ninox borneensis (Bp.) Salvad. Ucc. Born. p. 18.

Male and female from the Upper Mahakkam (Coll. Dr. Nieuwenhuis, 1898).

Hab. South Eastern Asia, from the Himalayas through India and Ceylon eastward to Japan, and southward through Malakka to Sumatra and Borneo.

Bubonidae.

9. *Scops lempiji.*

Strix lempiji Horsf. Trans. Linn. Soc. XIII, p. 140 (1822).
Scops lempiji Salvad. Ucc. Born. p. 19; Sharpe, Ibis 1889, p. 79; Everett, L. B. Born. p. 178.

An adult male (brown phase) from Pontianak (Schaedler), and a specimen from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99). — Iris brown, bill yellowish white, feet bluish white.

Hab. Malay Peninsula and the Sunda Islands.

10. *Bubo orientalis.*

Strix orientalis Horsf. Trans. Linn. Soc. XIII, p. 140 (1822).
Bubo sumatranus Salvad. Ucc. Born. p. 19.
Bubo orientalis Sharpe, Ibis 1889, p. 76; Everett, L. B. Born. p. 178.

An adult female from Mount Liang Koeboeng. — Iris dark brown, bill and cere yellow, feet yellow.

Hab. Malay Peninsula, Sumatra, Banka and Borneo.

11. *Syrnium leptogrammicum.*

Strix leptogrammica Temm. Pl. Col. II, pl. 525 (1831).
Ciccaba leptogrammica Salvad. Ucc. Born. p. 20.
Syrnium leptogrammicum Sharpe, Ibis 1889, p. 81; Everett, L. B. Born. p. 179.

A nestling from Long Bloe (Upper Mahakkam). — Iris brown, bill pale blue, feet gray. The specimen is in full down of a pale bay color, while the quills and tail-feathers are showing the barred appearance of the adult stage. — Contents of stomach: Spiders (von Berchtold).

Hab. Borneo.

12. *Phodilus badius.*

Strix badia Horsf. Trans. Linn. Soc. XIII, p. 139 (1822).
Phodilus badius Salvad. Ucc. Born. p. 21; Everett, L. B. Born. p. 178.

An adult male from Poetoes Sibau, and a female from Long Bloe (Upper Mahakkam). — Iris brown, bill yellowish white, cere rosy white, feet pale flesh-color. — Contents of stomach: remnants of a large nocturnal butterfly (von Berchtold).

Hab. Ceylon, and from the Eastern Himalayas through Burmah and the Malay Peninsula to Nias, Sumatra, Java and Borneo.

13. *Glaucidium sylvaticum.*

Plate 13.

Athene sylvatica Bp. Consp. I, p. 40 (Type in Mus. Lugd.), 1850.
Glaucidium sylvaticum Sharpe, Cat. B. Br. Mus. II, p. 215; Salvad. Ann. Mus. Civ. Stor. Nat. Genova, XIV, p. 174 (1879).
Glaucidium borneense Sharpe, Ibis 1893, p. 549 (Mount Kalulong), p. 562 (Kina Balu).

An adult male from Mount Liang Koeboeng (780 m. above the level of the sea). — Iris sulphur-yellow, bill and feet greenish yellow.

This rare and interesting species, probably a true mountain-form, was until lately only known from the typical specimen, collected by S. Müller, and two others, collected by Beccari in 1878, all three on the slopes of Mount Singalang, Western Sumatra. There is not the least difference to be found between this Bornean specimen and the type, neither in size nor in color, and a comparison of Dr. Sharpe's above quoted description of *G. borneensis* convinced me that the birds described under that new name belong to *G. sylvaticum*.

Hab. Sumatra and Borneo.

Psittacidae.

14. *Palaeornis longicauda.*

Psittacus longicauda Bodd. Tabl. Pl. Enl. p. 53 (1783).
Palaeornis longicauda Salvad. Ucc. Born. p. 22; Everett. L. B. Born. p. 177; Sharpe, Ibis 1890, p. 1.

Several males and females, shot out of a great number at Smitau, and a specimen from Pontianak (Moret). — Iris light yellow, bill red, lower mandible brown, feet gray.

Hab. The Malay Peninsula, Sumatra, Billiton, Borneo and Labuan.

15. *Loriculus galgulus.*

Psittacus galgulus Linn. Amoen. Acad. IV, p. 236 (1754).
Loriculus galgulus Salvad. Ucc. Born. p. 26; Everett, L. B. Born. p. 177; Sharpe, Ibis 1890, p. 1.

A great number of specimens from Pontianak, Sanggau, Roema Manoeal, Mount Liang Koeboeng, Poelau and Bruny River (Upper Mahakkam). — Iris grayish brown, bill black, feet wax-yellow to grayish brown.

Hab. Malay Peninsula, Sumatra, Nias, Banka and Borneo.

Trogonidae.

16. *Harpactes Diardi.*

Trogon Diardi Temm. Pl. Col. N°. 541 (1832).
Pyrotrogon Diardi Salvad. Ucc. Born. p. 28.
Harpactes Diardi Everett, L. B. Born. p. 166; Sharpe, Ibis 1890, p. 3.

Seven specimens from the forests of Mounts Kenepai and Liang Koeboeng. — Iris red, bare skin round the eye and the angle of the mouth purplish, bill cobalt, ridge, tip and edge of upper mandible black, feet flesh-color.

Hab. Malay Peninsula, Sumatra and Borneo.

17. *Harpactes kasumba.*

Trogon kasumba Raffl. Trans. Linn. Soc. XIII, p. 282 (1822).
Pyrotrogon kasumba Salvad. Ucc. Born. p. 29.
Harpactes kasumba Everett, L. B. Born. p. 166; Sharpe, Ibis 1890, p. 3.

Eight specimens from the Mounts Kenepai and Liang Koeboeng, one from Long Bloe (Upper Mahakkam), and a male and two females from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99). — Iris dark grayish brown, naked skin round the eye and round the base of the bill, and the entire bill ultramarine, ridge and tip of the upper mandible black, feet purplish gray. — Contents of stomach: spiders.

Hab. Malay Peninsula, Sumatra and Borneo. In the Kapoeas region it seems to live in the mountain forests only, while it is mentioned by Sharpe (l. c.) as a lowland-bird.

18. *Harpactes Duvaucelii.*

Trogon Duvaucelii Temm. Pl. Col. N°. 291 (1824).
Pyrotrogon Duvaucelii Salvad. Ucc. Born. p. 29.
Harpactes Duvaucelii Everett, L. B. Born. p. 166; Sharpe, Ibis 1890, p. 3.

A great number of specimens from Mounts Kenepai and Liang Koeboeng, Nanga Raoen and Poelau; and from the Upper Mahakkam. — Iris dark brown, eyelid purplish, bare skin above cobalt, at the base of the bill indigo, bill black, angle of mouth and bill indigo-blue, culmen and tip of bill black, feet purplish blue.

Hab. Malay Peninsula, Sumatra, Billiton and Borneo.

19. *Harpactes orrhophaeus.*

Pyrotrogon orrhophaeus Cab. & Heine, Mus. Hein. IV, p. 156 (1863).
Harpactes orrhophaeus Grant, Cat. B. Br. Mus. XVII, p. 493.

Two adult males from Mount Liang Koeboeng. — Iris dark brown, bare skin above the eye sea-green, bill sky-blue, culmen and tip black, feet purplish.

Hab. Hitherto only stated from the southern part of the Malay Peninsula, while it is new for the ornis of Borneo.

Capitonidae.

20. *Chotorhea chrysopsis.*

Megalaema chrysopsis Goffin, Mus. P. B., Buccones, p. 15 (1863); Everett, L. B. Born. p. 167; Sharpe, Ibis 1890, p. 4.
Chotorhea chrysopsis Salvad. Ucc. Born. p. 32; Shelley, Cat. B. Br. Mus. XIX. p. 59.

A great number of specimens from Mounts Kenepai and Liang Koeboeng, Nanga Raoen, Poetoes Sibau, Poelau and the Upper Mahakkam. — Iris reddish brown, bill black (in the female the base of lower mandible greenish horn-color), feet olive-green.

From the above mentioned localities may be seen that this species is found in the plain as well as in the mountain forests. Captain Shelley in his above quoted Catalogue allows only subspecific rank to this Bornean representative of *C. chrysopogon*, but our bird is so constantly distinct by its smaller size and the bright yellow forehead that it fully merits to be considered a quite distinct species.

Hab. Throughout Borneo.

»Der Ruf des Vogels ist ein kurzes, rasch hinter einander ausgestossenes kuko, kuko, kuko".

21. *Chotorhea versicolor.*

Bucco versicolor Raffl. Trans. Linn. Soc. XIII, p. 284 (1822).
Chotorhea versicolor Salvad. Ucc. Born. p. 33.
Chotorea versicolor, var. *borneensis* W. Blas. Verh. z. b. Ver. Wien, XXX, p. 25.
Megalaema versicolor Everett, L. B. Born. p. 167; Sharpe, Ibis 1890, p. 4.

A great number of adult specimens from Pontianak, Sanggau, Roema Manoeal, Nanga Raoen, Poelau and Upper Mahakkam. — Iris dark brown, bill black, feet dirty olive-green. — Contents of stomach: rests of the fruits of *Urostigma*. — A very common forest-bird.

Hab. Malay Peninsula, Sumatra and Borneo.

22. *Cyanops mystacophanos.*

Bucco mystacophanos Temm. Pl. Col. III, N°. 315 (1824).
Chotorea mystacophanus Salvad. Ucc. Born. p. 34, pl. 1.
Megalaema mystacophanus Goffin, Mus. P. B. Buccones, p. 18; Everett, L. B. Born. p. 167.
Megalaema mystacophanes Sharpe, Ibis 1890, p. 4.
Cyanops mystacophanes Shelley, Cat. Birds Br. Mus. XIX, p. 72.

Nineteen adult males and thirteen females from Sanggau, Roema Manoeal, Mounts Kenepai and Liang Koeboeng, Nanga Raoen and Poelau and thirteen from Long Bloe (Upper Mahakkam). — Iris dark brown, eyelid olive-green, bill entirely black in the males, black with the base of lower mandible greenish white in the female; feet dirty olive-green. — Contents of stomach: rests of the fruits of *Urostigma.*

Hab. Malay Peninsula, Sumatra and Borneo.

The question whether the adult females are similar in color to the adult males or not, has hitherto never satisfactorily been settled, though the species is very common in the forest-regions of the above mentioned countries.

Goffin (l. c.) considers the adult female to be of the same color as the adult male, but this opinion is solely based upon a specimen collected by Schwaner and mentioned as a female, while there are strong reasons to consider it an adult male.

Salvadori (l. c.) does not share the opinion of Goffin's, the collections of Doria and Beccari containing not a single specimen in full color (i. e. with golden yellow fore-head) sexed by the collectors as a female.

Shelley (l. c.) on the contrary, says that the adult female does not differ from the adult male, but amongst the numerous specimens enumerated in the Catalogue, there is only a single female (specimen *c'*) mentioned as adult, thus with yellow fore-head, while all the other numerous authentical females are considered to be immature.

The mentioned two »females" in the Leyden- and in British Museum are, in fact, the only specimens in full color which are mentioned to be females, while in litterature the great number of females are all considered to be immature. Besides the registered specimens in the Leyden Museum the one in Goffin's Catalogue and my own series, I have before me a number of specimens from Sumatra, collected by Vorderman, Klaesi and Hagen, and all the specimens marked as males have the fore-head more or less golden yellow while this is not the case in any of those marked as females.

After thoroughly considering these heavily weighing facts I come to the conclusion that the adult female of this species may constantly be distinguished from the adult males by the following characters: Chin yellowish green (not red), shading off into the blue throat, basal part of the moustachial streak blue (not yellow), fore-head green, somewhat shaded with blue (not golden yellow), extreme base of fore-head tinged with yellow, hinder part of the superciliary streak blue (not black), the occipital patch duller red and less extended than in the male, base of lower mandible whitish instead of black, size alike in both sexes. Immature birds may be recognized by the less overlapping edge of the basal part of the upper mandible. Young birds of both sexes are much like the adult females, but have the chin tinged with olive-gray, and the blue on throat, angle of mouth, under the eye and on the hind part of the superciliary streak is more or less absent, while the red occipital patch is more or less wanting.

In the nearly adult male the green chin is intermixed with red feathers and the red patch on the sides of the throat begins to show very early in males and females.

23. *Cyanops Henricii.*

Bucco Henricii Temm. Pl. Col. III, N°. 524 (1831).

Megalaema Henrici Sharpe, Ibis 1879, p. 239; Everett, L. B. Born. p. 168.

A probably immature male from Nanga Raoen, and three females from Long Bloe (Upper Mahakkam). — Iris brown, bill black, feet dirty olive-green. The specimen from Nanga Raoen wants the blue crown-patch and the red collar on the hind neck, while the yellow on the front is not so deep as in adult birds and not extending over the sides of the crown; the blue color on the throat is paler and less extended, and the red patches on the sides of the throat are smaller. The whole bird is much smaller than the adult and even smaller than the young specimens from Sumatra, and the bill much shorter, the culmen measuring only two cm. instead of 2,5. Having no adult male from Borneo to compare with, I dare not say that the Bornean specimens as a rule have the bill shorter than those from the Malay Peninsula and Sumatra.

Hab. Malay Peninsula, Sumatra and Borneo.

24. *Cyanops monticola.*

Cyanops monticola Sharpe, Ann. & Mag. Nat. Hist. 1888, p. 424; Everett, L. B. Born. p. 168; Sharpe, Ibis 1890, p. 5.

Two males and a female from Mount Liang Koeboeng. — Iris reddish brown, bill in male entirely black, in the female the upper mandible only black, lower mandible green, feet green. The males agree fully with Dr. Sharpe's description, the female differs from the male in having the lower mandible green (two females from Mr. Hose's collection agree exactly with mine).

Hab. Mountain-regions of Borneo (Kina Balu, Mt Dulit, Liang Koeboeng).

25. *Mesobucco Duvauceli.*

Bucco Duvauceli Less. Traité d'Orn. p. 164 (1831).
Xantholaema Duvauceli Salvad. Ucc. Born. p. 38; Everett, L. B. Born. p. 168; Sharpe, Ibis 1890, p. 5.
Mesobucco Duvauceli Sharpe, Ibis 1890, p. 281.

A great number of specimens from Roema Manoeal, Mount Kenepai, Nanga Raoen, Poetoes Sibau, Poelau and Long Bloe (Upper Mahakkam). — Iris dark brown, bill black, feet yellowish green.

Hab. Malay Peninsula, Sumatra and Borneo.

26. *Mesobucco eximius.*

Mesobucco eximius Sharpe, Ibis 1892, pp. 324 and 441, pl. XI; Hose, Ibis 1893, p. 414.

An adult male from Mount Liang Koeboeng. — Iris dark brown, bill black, feet yellowish green.

Hab. Mountain-regions of Borneo, where it has hitherto only been recorded from several mountains of Sarawak; it seems to be exceedingly a mountain-form.

27. *Calorhamphus fuliginosus.*

Micropogon fuliginosus Temm. Pl. Col. III, livr. 83 (1830).
Calorhamphus fuliginosus Goff. Mus. P.-B. Buccones, p. 73 (part.); Salvad. Ucc. Born. p. 39; Everett, L. B. Born. p. 168; Sharpe, Ibis 1890, p. 6.

A great number of specimens from Roema Manoeal, one from Mount Liang Koeboeng, one from Nanga Raoen and one from Long Bloe. — Iris brown, bill of the males grayish black, of the females flesh-color, feet coral-red.

This species is usually found in great flocks, feeding on fruits in high forest trees.

Hab. Borneo generally, representing there *C. Hayi* from the Malay Peninsula and Sumatra.

Picidae.

28. *Jyngipicus auritus.*

Tripsurus auritus Eyt. Ann. and Mag. Nat. Hist. XVI, p. 229 (1845).
Jyngipicus auritus Everett, L. B. Born. p. 154; Sharpe, Ibis 1890, p. 6.

Three specimens from Pontianak. — Iris red, bill black, feet grayish green.

Hab. From Cochin China down through Siam and the Malay Peninsula to Sumatra, Java and Borneo.

29. *Chrysocolaptes validus.*

Picus validus Temm. Pl. Col. 378 ♂, 402 ♀ (1825).
Xylolepes validus Salvad. Ucc. Born. p. 43; Everett, L. B. Born. p. 154; Sharpe, Ibis 1890, p. 6.

A male and a female from Poetoes Sibau and Mount Liang Koeboeng, and three males and two females from the Upper Mahakkam (Dr. Nieuwenhuis, winter 1898—99).

Iris of the male reddish brown, upper mandible brown, lower mandible yellow, feet grayish green, of the female iris ochraceous, upper mandible gray, lower mandible whitish, feet gray.

Hab. Malay Peninsula and the Sunda Islands.

30. *Hemicercus sordidus.*

Dendropicus sordidus Eyt. Ann. & Mag. Nat. Hist. XVI, p. 229 (1845).
Hemicercus concretus Bp. Consp. I, p. 129; Salvad. Ucc. Born. p. 47.
Hemicercus sordidus Salvad. Ucc. Born. p. 46; Everett, L. B. Born. p. 155; Sharpe, Ibis 1890, p. 7.

Five specimens from Pontianak, Smitau, Roema Manoeal, Poetoes Sibau (Nieuwenhuis) and Poelau, and three specimens from the Upper Mahakkam.

Iris reddish brown, bare space round the eye ashy gray, bill black, feet dark gray. — Contents of stomach: small white ants.

Hab. Malay Peninsula, Sumatra, Banka and Borneo, where it is generally distributed.

A probably not quite adult male from Smitau has the feathers of the flanks conspicuously tipped with fulvous.

31. *Lepocestes porphyromelas.*

Picus porphyromelas Boie, Briefe geschr. aus Ostind. p. 143 (1832).
Lepocestes porphyromelas Salvad. Ucc. Born. p. 48; Everett, L. B. Born. p. 155; Sharpe, Ibis 1890, p. 7.

A male and three females from Mount Kenepai, a female from Mount Liang Koeboeng, and a male from the Mahakkam River. — Iris blood-red, bill yellow, feet dark gray.

Hab. From Tenasserim through the Malay Peninsula to Sumatra and Borneo, where it is found throughout the island.

32. *Gecinus puniceus.*

Picus puniceus Horsf. Trans. Linn. Soc. XIII, p. 176 (1822).

Callolophus puniceus Salvad. Ucc. Born. p. 49.
Gecinus puniceus Everett, L. B. Born. p. 156; Sharpe, Ibis 1890, p. 7.

A large series of specimens from Pontianak, Sanggau, Mount Kenepai, Nanga Raoen, Mount Liang Koeboeng and Poelau, and four specimens from the Upper Mahakkam. — Iris blood-red, bare space round the eye sky-blue, bill yellow, ridge and tip black, feet yellowish green. — Contents of stomach: small tree-ants.

Hab. From Tenasserim through the Malay Peninsula to Nias, Sumatra, Java and Borneo.

33. *Chrysophlegma Humii.*

Callolophus mentalis Salvad. Ucc. Born. p. 49.
Chrysophlegma humii Hargitt, Ibis 1889, p. 231; Everett, L. B. Born. p. 155; Sharpe, Ibis 1890, p. 7.

Eight specimens from Pontianak, Nanga Raoen, and Mount Liang Koeboeng. — Iris reddish brown, bare space round the eye and angle of mouth green, bill black, lower mandible lead-color, feet green.

It is a rather peculiar fact that amongst the eight specimens collected there is only one male, and that this specimen has chin and malar stripe as strongly tinged with rufous as the female.

Hab. Malay Peninsula, Sumatra and Borneo.

34. *Chrysophlegma malaccense.*

Picus malaccensis Lath. Ind. Orn. I, p. 241 (1790).
Callolophus malaccensis Salvad. Ucc. Born. p. 50.
Chrysophlegma malaccense Everett, L. B. Born. p. 155; Sharpe, Ibis 1890, p. 7.

Numerous specimens from Pontianak, Smitau, Mount Liang Koeboeng and Poelau (Sibau valley). — Iris blood-red, bill black, lower mandible pale horn-color, feet grayish green.

Hab. From Tenasserim through the Malay Peninsula to Sumatra, Banka and Borneo, where it is common throughout the island.

35. *Hemilophus pulverulentus.*

Picus pulverulentus Temm. Pl. Col. 389 ♂ (1826).
Alophonerpes pulverulentus Salvad. Ucc. Born. p. 51; Sharpe, Ibis 1890, p. 8.
Mulleripicus pulverulentus Everett, L. B. Born. p. 156.
Hemilophus pulverulentus Swains. Classif. B. II, p. 309; Hargitt, Cat. B. Br. Mus. XVIII, p. 494.

A male and two females from Pontianak, Nanga Raoen and Poelau, and two from the Mahakkam River. — Iris dark brown, bill whitish horn-color, culmen black, feet bluish gray.

Hab. South-eastern Asia, Malay Peninsula, Sumatra [1]), Java and Borneo.

36. *Gauropicoides Rafflesii.*

Picus Rafflesii Vig. Raffl. Mem., App. p. 669 (1831).
Gauropicoides Rafflesii Salvad. Ucc. Born. p. 54; Everett, L. B. Born. p. 157; Sharpe, Ibis 1890, p. 8.

Eight specimens from Pontianak, Mount Kenepai and Liang Koeboeng. — Iris dark brown, bill black, base of lower mandible gray, feet dirty olive-green.

Hab. Malay Peninsula as far as Tenasserim, Sumatra and Borneo.

37. *Miglyptes grammithorax.*

Miglyptes tristis (nec Horsf.) Salvad. Ucc. Born. p. 56.
Phaiopicus grammithorax Malh. Picidae, II, p. 12, pl. 48, figs. 4 and 5 (1862).
Miglyptes grammithorax Everett, L. B. Born. p. 158; Sharpe, Ibis 1890, p. 8.

Seven specimens (all females!) from Pontianak, Mounts Kenepai and Liang Koeboeng, and Nanga Raoen, and three specimens from the Upper- and Lower Mahakkam. —

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1) This species is mentioned in Vorderman, Les Oiseaux de Sumatra, p. 390 (1889), and also in Hargitt's above mentioned Catalogue, but there does not seem to exist any authentical Sumatran specimen in collections.

Iris dark brown, bill black, feet dirty olive-green, soles ochraceous.

Hab. Malay Peninsula north to Tenasserim, Nias, Sumatra and throughout Borneo.

38. *Miglyptes Tukki.*

Picus Tukki Less. Rev. Zool. 1839, p. 167.
Miglyptes Tukki Salvad. Ucc. Born. p. 57; Everett, L. B. Born. p. 158; Sharpe, Ibis 1890, p. 9.

A male and six females from Mount Liang Koeboeng, Nanga Raoen, and Poelau, and a male and four females from the Upper Mahakkam. — Iris reddish brown, bill black, lower mandible greenish horny, feet grayish green, soles ochre.

Hab. Malay Peninsula up to Tenasserim, Nias, Sumatra, throughout Borneo.

39. *Micropternus badiosus.*

Meiglyptis badiosus Temm. Mus. Lugd.; Bp. Consp. I, p. 113 (1850).
Micropternus badiosus Bp. Consp. Volucr. Zygod. p. 9; Salvad. Ucc. Born. p. 58; Everett, L. B. Born., p. 158; Sharpe, Ibis 1890, p. 9.

Five specimens from Pontianak and Mount Liang Koeboeng. — Iris reddish brown, bill black, tip and lower mandible whitish, feet grayish brown.

Hab. Throughout Borneo.

40. *Sasia abnormis.*

Picumnus abnormis Temm. Pl. Col. IV, pl. 371, fig. 3 (1825).
Sasia abnormis Salvad. Ucc. Born. p. 60; Everett, L. B. Born. p. 154; Sharpe, Ibis 1890, p. 9.

Eight specimens from Smitau, Mount Kenepai, Mount Liang Koeboeng and Poelau, and five specimens from the Upper Mahakkam. — Iris blood-red, naked skin round the eye pink, upper mandible black, lower greenish yellow, feet orange-yellow, in a specimen from Smitau minium-red.

The female of this species has the forehead similar in color to the sides of the head, while in the male this part is straw-yellow. An immature specimen (N° 1500 from Poelau) has the lower surface partly green instead of cinnamon-brown.

Hab. Malay Peninsula, Nias, Sumatra and Borneo.

Indicatoridae.

41. *Indicator archipelagicus.*

Indicator archipelagicus Temm. Pl. Col. pl. 543, fig. 2 (1832); Salvad. Ucc. Born. p. 61; Everett, L. B. Born. p. 169; Sharpe, Ibis 1890, p. 9.

An adult male from Poelau. — Iris red, bill black, base of lower mandible flesh-color, feet grayish brown.

Hab. Malay Peninsula and Borneo.

Cuculidae.

42. *Chalcococcyx xanthorhynchus.*

Cuculus xanthorhynchus Horsf. Trans. Linn. Soc. XIII, p. 179 (1822).
Chrysococcyx xanthorhynchus Salvad. Ucc. Born. p. 62; Everett, L. B. Born. p. 172[1]); Sharpe, Ibis 1890, p. 9.
Chalcococcyx xanthorhynchus Shelley, Cat. B. Br. Mus. Vol. XIX, p. 289.

A male and two females from the Upper Mahakkam (Dr. Nieuwenhuis, 1899).

Hab. South-western part of the Continent through the Malay Peninsula to Sumatra, Borneo and Java and the Andamans.

43. *Surniculus lugubris.*

Cuculus lugubris Horsf. Trans. Linn. Soc. XIII, p. 175 (1822).

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[1]) Everett, in a note to *Chrysococcyx xanthorhynchus*, suggests that *Heterococcyx neglectus* (Schleg.) Salvad. Ucc. Born. p. 61, the type of which is in the Leyden Museum, might be a style of *C. xanthorhynchus*, for which reason he does not enumerate it in his List as a distinct species. Shelley, in his above mentioned catalogue, p. 294, adds it, though with a point of interrogation, to the synonymy of *Chalcococcyx basalis*. Dr. Finsch, whom I asked to examine the bird in question, writes me that it is really a good species, allied to *Prodotiscus regulus* Sund. and that *Heterococcyx* of Salvadori is a valid genus. Shelley entirely forgot to mention the genus in his Catalogue.

Surniculus lugubris Salvad. Ucc. Born. p. 63; Everett, L. B. Born. p. 172; Sharpe, Ibis 1890, p. 10.

Three adult specimens from Mount Kenepai, Nanga Raoen and Liang Koeboeng and eight adult specimens from the Upper Mahakkam. — Iris dark brown, bill black, feet purplish, soles ochre-yellow.

Hab. From India and Ceylon to South China, Southern Philippines, Borneo, Sumatra and Java (Shelley, Cat. B. Br. Mus. XIX, p. 227, mentions Batchian as habitat of this species, but this is undoubtedly an error, this species being represented on that island by *S. Musschenbroeki* Meyer).

44. *Penthoceryx pravatus.*

Cuculus pravata Horsf. Trans. Linn. Soc. XIII, p. 179 (1822).

Penthoceryx pravatus Salvad. Ucc. Born. p. 63; Sharpe, Ibis 1890, p. 10.

Cacomantis pravata Bütt. N. L. M. 1887, p. 27.

Cuculus Sonnerati Everett, L. B. Born. p. 170; Shelley, Cat. B. Br. Mus. XIX, p. 262.

An adult male (N° 1002) from Mount Liang Koeboeng. — Iris brown, bill black, lower mandible horny gray, feet yellowish green.

Hab. South-eastern Asia, Malay Peninsula and Sunda Islands.

This species is mentioned, as quoted above, under the name of *Cuculus Sonnerati* by Everett and Shelley. I feel, however, obliged to maintain the generic name *Penthoceryx* for the two species *Sonnerati* and *pravatus*, convinced as I am that these two species cannot be placed in the genus *Cuculus* proper. This latter is always characterized by more or less pronounced longitudinal shaft-spots on at least some of the tail-feathers, which character is quite peculiar to this genus only, and as it is not found in *Cacomantis Sonnerati* and *C. pravatus*, which two species are, moreover, much smaller than the average size of *Cuculus*, I do not hesitate to place them under the generic name *Penthoceryx* as proposed by Cabanis and Heine and later on maintained by Salvadori and other ornithologists.

The genus *Penthoceryx* is closely allied to *Cacomantis*, but differs from it in having the barrings on the tail, as far as they are present, always placed transversely, i. e. in a right angle to the shaft, while in all the species of *Cacomantis* the barrings on the tail-feathers, as far as they are present, are placed obliquely, which character it has in common with the square-tailed genus *Surniculus*.

As to the identity of the species *pravatus* with *Sonnerati*, I cannot agree with the view of Shelley's, and prefer to keep both species separate. *P. Sonnerati* is a much larger bird than *P. pravatus*, its wing measuring 5 inches, while in the Malayan birds (*P. pravatus*) the largest specimen at hand measures but 4,3 inches.

45. *Cacomantis merulinus.*

Cuculus merulinus Scop. Del. Flor. et Faun. Insubr. II, p. 89 (1786).
Cacomantis merulinus Salvad. Ucc. Born. p. 64; Everett, L. B. Born. p. 172; Sharpe, Ibis 1890, p. 10.

An adult and a young female from Banjok, a Dyak village near the great falls of the Mahakkam River (Dr. Nieuwenhuis). — Iris pale ochraceous, bill dark gray, feet gray.

Hab. South-eastern Asia through the Malay Peninsula and the whole Malay Archipelago.

46. *Hierococcyx fugax.*

Cuculus fugax Horsf. Trans. Linn. Soc. XIII, p. 178 (1822).
Hierococcyx fugax Salvad. Ucc. Born. p. 65; Everett, L. B. Born. p. 171; Sharpe, Ibis 1890, p. 10.

An immature male from Mount Kenepai, and three males and two females from the Upper Mahakkam. — Iris chestnut encircled with white, bill black, lower mandible at the base, nostrils and eyelid chrome-yellow, feet sulphur-yellow. Males and females quite similar.

Hab. Whole eastern Asia, Malay Peninsula, Sumatra, Java, Borneo and the Philippines.

47. *Cuculus intermedius.*

Cuculus intermedius Vahl, Scriv. of Natuur. Selsk. IV, p. 58 (1797); Shelley, Cat. B. Br. Mus. XIX, p. 252.
Cuculus canorinus (Cab. & Heine) Salvad. Ucc. Born. p. 67.
Cuculus striatus (Drap.) Everett, L. B. Born. p. 170.

An adult male from the Upper Mahakkam (Dr. Nieuwenhuis 1898).

Hab. From Eastern and South Eastern Asia through the Malay Archipelago and New Guinea to Australia.

48. *Coccystes coromandus.*

Cuculus coromandus L. Syst. Nat. I, p. 171 (1766).
Coccystes coromandus Salvad. Ucc. Born. p. 67; Everett, L. B. Born. p. 173; Sharpe, Ibis 1890, p. 12; Shelley, Cat. B. Br. M. XIX, p. 214.

An adult male (Dr. Nieuwenhuis, Upper Mahakkam, 6 February 1899).

Hab. From India and Ceylon through South-east Asia to the Sunda Islands and the Philippines.

49. *Rhinortha chlorophaea.*

Cuculus chlorophaeus Raffl. Trans. Linn. Soc. XIII, p. 288 (1822).
Rhinortha chlorophaea Salvad. Ucc. Born. p. 69; Everett, L. B. Born. p. 173; Sharpe, Ibis 1890, p. 13.

A great number of specimens from Pontianak, Roema Manoeal, Nanga Raoen, Mount Liang Koeboeng, Poelau, and the Upper Mahakkam. — Iris brown, bill and bare space round the eye green, feet gray. The males rusty red, the females gray.

Hab. From Southern Tenasserim through the Malay Peninsula to Sumatra and Borneo.

50. *Rhopodytes borneensis.*

Melias borneensis Bp. Consp. Volucr. Zygod. p. 5 (1854).
Rhopodytes borneensis Salvad. Ucc. Born. p. 72; Everett, L. B. Born. p. 174.

An adult female from Mount Kenepai. — Iris pale blue, bare space round the eye crimson, bill green, feet bluish gray.

Hab. Borneo, from Sarawak to Banjermassing.

51. *Rhopodytes sumatranus.*

Cuculus sumatranus Raffl. Trans. Linn. Soc. XIII, p. 287 (1822).
Rhopodytes sumatranus Salvad. Ucc. Born. p. 73; Everett, L. B. Born. p. 174.
Poliococcyx sumatranus Sharpe, Ibis 1890, p. 13.

Eleven specimens from Smitau, Roema Manoeal, Poetoes Sibau, and Banjok on the Mahakkam River. — Iris whitish blue, bare skin round the eye minium-red, bill green, feet bluish gray.

Hab. From Southern Tenasserim through the Malay Peninsula to Sumatra, Java and Borneo.

52. *Phoenicophaes microrhinus.*

Phoenicophaeus erythrognathus Bp. Consp. I, p. 98 (1850).
Ramphococcyx erythrognathus Salvad. Ucc. Born. p. 74; Everett, L. B. Born. p. 174.
Rhopodytes erythrognathus Sharpe, Ibis 1890, p. 12.
Urococcyx erythrognathus Shelley, Cat. B. Br. Mus. XIX, p. 398.
Phoenicophaes microrhinus Berlepsch, Novit. Zool. 1895, p. 70.

A great series, collected at Roema Manoeal, Mount Kenepai, Mount Liang Koeboeng, Poelau, Poetoes Sibau, and on the Upper Mahakkam. — The color of the iris differs much in the different specimens, but this difference must be considered to be absolutely individual, and not due to either sex or age, as, for instance, out of two adult males both obtained on the same place and at the same date, one has the iris bluish white, while in the other it is blood-red. Amongst the specimens collected in Borneo, there are some with the iris pure white, bluish white, orange-yellow, orange-red, fiery red and blood-red. The bill is pea-green (»plantain-green" as I called it in my annotations), lower mandible (with the exeption of the green tip) and the lower corner of the base of the upper mandible red, inside of mouth and tongue black, naked part round the eye scarlet; feet grayish blue, sometimes tinged with green, soles ochraceous.

Hab. Throughout Borneo, in the plains as well as in the mountain-forests. Count von Berlepsch, in his above quoted paper, was the first who stated the constant difference of the Bornean specimens from those from Malacca and Sumatra, which hitherto had been united under the specific name of *Ramphococcyx erythrognathus*. The principal differences consist in the shape of the nostrils, which are oblong in the Bornean specimens while they are circular in the birds from Sumatra and Malacca, and in the length of the red terminal part of the central tail-feathers which is constantly less in Bornean birds than in those from Sumatra and the Malay Peninsula. The length of wing and tail, said by von Berlepsch to be inferior in Bornean birds, does not differ constantly in the rich material at hand from Borneo and Sumatra.

Count von Berlepsch, in his above quoted paper, also mentions the reasons why he re-unites the genera *Ramphococcyx*, *Rhinococcyx* and *Urococcyx*, and *Dryococcyx* with *Phoenicophaes*, and I fully agree with the view based upon his arguments. I also confirm the difference in the sex of the present species, which holds well in all the numerous specimens which I have collected and sexed myself during my stay in Borneo, although this is not the case with the three specimens from the Upper Mahakkam, which are probably wrongly sexed by von Berchtold.

53. *Zanclostomus javanicus.*

Phoenicophaes javanicus Horsf. Trans. Linn. Soc. XIII, p. 178 (1822).
Zanclostomus javanicus Salvad. Ucc. Born. p. 75; Everett, L. B. Born. p. 175; Sharpe, Ibis 1890, p. 13.

An adult male from Roema Manoeal. — Iris dark brown, bill coral-red, feet gray.

Hab. Malay Peninsula, Sumatra, Java and Borneo, where it is distributed over the whole island.

54. *Carpococcyx radiatus.*

Calobates radiceus Temm. Pl. Col. 538 (1832).
Calobates radiatus Temm. Tabl. Méth. p. 53 (1838).
Carpococcyx radiatus Salvad. Ucc. Born. p. 76; Everett, L. B. Born. p. 175; Finsch, N. L. M. XX (1898), p. 98.

An adult female from Dingey, on the Upper Long Bloe River (Coll. Dr. Nieuwenhuis). — »Iris bluish gray, bill pea-green, naked parts of the face olive-green, feet olive-green. — Contents of the stomach: beetles and other insects" (von Berchtold).

Hab. Borneo, spread over the whole island.

55. *Centropus sinensis.*

Polophilus sinensis Steph. Gen. Zool. IX, p. 51 (1815).
Centrococcyx eurycercus Salvad. Ucc. Born. p. 78; Everett, L. B. Born. p. 175; Sharpe, Ibis 1890, p. 13.
Centropus sinensis Shelley, Cat. B. Br. Mus. XIX, p. 343.

Five specimens collected by Dr. Nieuwenhuis on the Upper Mahakkam. — Iris carmin, bill and feet black. A young, not yet full-grown specimen does not differ in color from the adult.

This bird is found nesting in rice-fields, and many supersticious believes are annexed to it (von Berchtold). — Contents of the stomach: grasshoppers.

Hab. From British India and Ceylon throughout South-eastern Asia and the Malay Peninsula to the Sunda-Islands and the Southern Philippines.

Bucerotidae.

56. *Anorrhinus galeritus.*

Buceros galeritus Temm. Pl. Col. 520, p. 78 (1824).
Anorrhinus galeritus Salvad. Ucc. Born. p. 79; Everett, L. B. Born. p. 163; Sharpe, Ibis 1890, p. 16.

An immature male (N° 438) from Mount Kenepai, a nestling (N° 1325), showing the brown color of the breast, from Nanga Raoen, and an adult male from the Upper

Mahakkam. — Iris whitish yellow, in the nestling gray; bill pea-green, tip rosy, feet greenish gray. In the specimen from the Mahakkam the iris is said to be red.

Hab. From Tenasserim through the Malay Peninsula to Sumatra and Borneo.

57. *Anthracoceros convexus.*

Buceros convexus Temm. Pl. Col. II, p. 82, pl. 530 (♀) (1832).
Hydrocissa convexa Salvad. Ucc. Born. p. 80.
Anthracoceros convexus Everett, L. B. Born. p. 162; Sharpe, Ibis 1890, p. 15.

Two males and a female from the Sibau River. — Iris red in the male, brown in the female, naked space round the eye in both sexes white, bill in the male entirely white, casque very large, white, black at the base like the base of the lower mandible, a broad black band along the lower frontal edge of the casque. In the female the casque is much smaller, with vertical frontal edge, which is black, as also the fore-part of the upper and lower mandible, which latter bears a red patch in front of the black basal part; feet in male and female bluish gray. In a half-grown specimen the iris is gray, the naked parts of face rosy white, bill pale yellowish green, feet bluish gray.

Hab. Malay Peninsula, Nias, Sumatra, Java and Borneo.

58. *Anthracoceros malayanus.*

Buceros malayanus Raffl. Trans. Linn. Soc. XIII, p. 292 (1822).
Hydrocissa malayana Salvad. Ucc. Born. p. 83.
Anthracoceros malayanus Everett, L. B. Born. p. 162; Sharpe, Ibis 1890, p. 16.
Hydrocissa nigrirostris (♀) Salvad. Ucc. Born. p. 84; Vorderman, Natuurk. Tijdschr. Ned. Ind. LI, p. 218 (1891).

An adult male (N° 293) from Roema Manoeal with white, very strongly developed bill and casque, and with strongly developed pure white superciliary stripe; further a second adult male (N° 1210) from Nanga Raoen, and another N° 134 (Dr. Nieuwenhuis) from Long Bloe (Upper-Mahakkam) with bill and casque white but with ashy gray eyebrow; a young, not yet fullgrown female with white bill and casque, which latter is but faintly developed, and ashy gray eyebrow, and moreover what I should call a nearly adult female (the sex is thoroughly stated) with black bill and casque, and hardly any trace of a gray superciliary stripe, and the naked skin round the eye and at the base of the lower mandible dark flesh-color (N° 1392 from Poelau), and an adult female (N° 78) from the Upper Mahakkam, with black bill, well-developed black casque and very distinct gray superciliary stripe. — Iris in adult and young birds of both sexes reddish brown, bill in adult males yellowish white with black basal edge, in the adult female black, in young birds of both sexes white; feet dark greenish gray.

Salvadori, in his Uccelli di Borneo, followed Blyth and others in separating the black-billed birds as a distinct species, a supposition which is followed by Vorderman in his above quoted contribution to the Ornithology of Sumatra. I cannot agree with this supposition, but yield to the opinion of Schlegel's who, in his Catalogue of the Bucerotes, p. 7, considers the black-billed birds the adult females of *Buceros malayanus*, and the white billed adult birds as the males, while young birds of both sexes should have the bill white. This latter supposition is not in contradiction with the four young birds in the Leyden Museum, which all have the bill white. Mr. Grant, in his Catalogue of the Bucerotes in the British Museum (Vol. XVII, p. 369) seems not to agree with the opinion of Schlegel's, as he says that the only difference between male and female is to be found in the color of the superciliary stripe, which should be white in the male and gray in the female. The black bill is considered by him to indicate a transitional stage of immaturity to be found in both sexes, while young birds of both sexes should have white bills. As to the supposition of the black bill being representing a stage of immaturity, I cannot agree with Mr. Grant, nor can I consider the color of the superciliary stripe as a characteristical of the sexes in this species. As I have mentioned already, one of my adult white billed males has the superciliary stripe white, while in the other it is gray, and the same is the case with the white-billed specimens of this species in the Leyden Museum, while one of these latter has no superciliary stripe at all. The black-billed specimens in the Leyden Museum have, as a rule, the eyebrow gray, but three specimens, one from the Continent, one from Banka and one from Sumatra (the specimen described by Vorderman in his above quoted paper) have broad, pure white eyebrows. For this reason I cannot consider the color of the eyebrow a sexual character. Young birds are easily recognized by having the white terminal part of the tail-feathers spotted with black.

Hab. South-eastern part of the Continent, Sumatra, Banka and Borneo.

59. *Cranorrhinus corrugatus.*

Buceros corrugatus Temm. Pl. Col. II, pl. 531 [♂] (1832).
Buceros gracilis Temm. Pl. Col. II, pl. 535 [♀] (1832).
Cranorrhinus corrugatus Salvad. Ucc. Born. p. 86; Everett, L. B. Born. p. 163.

An adult male from Poelau and an immature male from the Upper Mahakkam. — Iris blood-red, bare skin round the eye sea-green, bare chin and throat Naples-yellow, bill orange-yellow, base of upper mandible and the entire casque blood-red, feet dark grayish green, soles yellowish gray.

Hab. Malay Peninsula, Sumatra and Borneo.

60. *Buceros rhinoceros.*

Buceros rhinoceros Linn. Syst. Nat. I, p. 153 (1766); Everett, L. B. Born. p. 162; Sharpe, Ibis 1890, p. 14.
Buceros rhinoceroides Salvad. Ucc. Born. p. 87.

Two specimens from Mount Kenepai, one from Mount Liang Koeboeng and a young female from the Upper Mahakkam (November 1898). — Iris in the male red, in the female white, base of bill and casque black, rest of lower and tip of upper mandible white, central part of upper mandible and front of casque chrome-yellow, rest of casque and lower basal corner of upper mandible coral-red, feet yellowish green; the male is moreover characterized by a black line running from the nostril along the lower part of the horn, separating the red from the yellow parts of the, casque.

Hab. Malay Peninsula, Sumatra and Borneo, where it is found in the forests of the plains as well as in the higher mountain-regions.

61. *Rhinoplax vigil.*

Buceros vigil Forst. Ind. Zool. p. 40 (1781).
Rhinoplax scutatus Salvad. Ucc. Born. p. 88.
Rhinoplax vigil Everett, L. B. Born. p. 162; Sharpe, Ibis 1890, p. 15.

Several specimens observed along the high rock-walls above my hunting station on Mount Liang Koeboeng.

Hab. Malay Peninsula, Sumatra and Borneo.

62. *Berenicornis comatus.*

Buceros comatus Raffl. Trans. Linn. Soc. XIII, p. 399 (1822).
Berenicornis comatus Bp. Consp. I, p. 91.
Anorrhinus comatus Everett, L. B. Born. p. 164; Sharpe, Ibis 1890, p. 16.

An adult female from Bruny River (Upper Mahakkam). — Iris ochraceous, bill and feet dirty gray.

Hab. Malay Peninsula, Sumatra and Borneo.

»Dieser Vogel lebt nur paarweise. Seine Stimme ist ein lebhaftes, sich oft hinter einander wiederholendes »kukuk", beinahe wie der Ruf des europäischen Kukuks" (v. Berchtold).

Meropidae.

63. *Merops philippinus.*

Merops philippinus Linn. Syst. Nat. Ed. 13, I, p. 183 (1767) [1]; Salvad. Ucc. Born. p. 89; Everett, L. B. Born. p. 164.

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[1] A supplementary edition to the twelfth, published at Vienna, 1767,

A female from Pontianak, N° 1517 (Moret) and another from a plantation at Poetoes Sibau (N° 2). — Iris red, bill black, feet gray. The first specimen differs from the typical habitus in having the feathers on head, hind neck, mantle, lesser wing-coverts and breast broadly bordered with blue, and in having the throat but faintly shaded with chestnut. The plumage in this specimen is rather worn off and the centre tail-feathers are newly moulted.

Hab. Malay Peninsula, the Philippines and the whole Malay Archipelago.

64. *Nyctiornis amicta.*

Merops amictus Temm. Pl. Col. IV, pl. 310 (1824).
Nyctiornis amicta Salvad. Ucc. Born. p. 91; Everett, L. B. Born. p. 164; Sharpe, Ibis 1890, p. 18.

Numerous specimens from Mounts Kenepai and Liang Koeboeng, and seven specimens from Long Bloe (Upper Mahakkam). — Iris orange-red, bill black, base of lower mandible white, feet green. — Contents of stomach: wild bees.

Hab. Malay Peninsula, Sumatra and Borneo.

Alcedinidae.

65. *Alcedo bengalensis.*

Alcedo bengalensis Gm. S. N. I, p. 450 (1788); Salvad. Ucc. Born. p. 92; Everett, L. B. Born. p. 158; Sharpe, Ibis 1890, p. 18.
Alcedo ispida (part.) Sharpe, Cat. B. Br. Mus. XVII, p. 141.

A small series from Pontianak, Sanggau and Smitau. — Iris black, bill in the male entirely black, in the female black, lower mandible red; feet red.

Hab. South-eastern Asia, Japan, Malay Archipelago.

66. *Alcedo meninting.*

Alcedo meninting Horsf. Trans. Linn. Soc. XIII, p. 172 (1822); Salvad. Ucc. Born. p. 93; Sharpe, Ibis 1890, p. 18.

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where this specific name is based upon Brisson's *Apiaster philippinus major* (see also Walden, Trans. Zool. Soc. VIII, p. 42).

Alcedo asiatica Everett, L. B. Born. p. 159.

Six specimens from Pontianak, Poetoes Sibau and Nanga Raoen, four specimens from the Upper- and one from the Lower Mahakkam. — Iris dark brown, bill black with white tip, inside of mouth orange-red, feet minium-red.

Hab. Malay Peninsula, the Sunda Islands and Celebes.

Field-notes of Mr. von Berchtold: »Ein rascher und scheuer Vogel, der sehr gut taucht und mit grosser schnelligkeit einige Meter über dem Wasser dahinfliegt. Fast bloss im Fliegen lässt er seine »sih, sih" klingende Stimme hören, bei welcher die Töne schnell auf einander und fast in gleicher Höhe folgen. Wenn er auf Beute lauert, sitzt er unbeweglich auf einem Zweige des überhängenden Ufergebüsches".

67. *Alcedo euryzona.*

Atcedo euryzona Temm. Pl. Col. text in livr. 86 (1830); Salvad. Ucc. Born. p. 95; Everett, L. B. Born. p. 159; Sharpe, Ibis 1890, p. 18.

An adult female from the forests of Mount Liang Koeboeng and another from Long Bloe (Upper Mahakkam). — Iris brown, bill black, lower mandible coral-red, feet coral-red.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

68. *Pelargopsis leucocephala.*

Alcedo leucocephala Gm. S. N. I, p. 456 (1788).
Pelargopsis leucocephala Salvad. Ucc. Born. p. 95; Everett, L. B. Born. p. 159; Sharpe, Ibis 1890, p. 19.

Three specimens from Poetoes Sibau (Coll. Nieuwenhuis). — Iris brown, bill and feet red.

Hab. Restricted to Borneo.

Annotations of Mr. von Berchtold: »Ein kluger und scheuer, zanksüchtiger Vogel, der leidlich schwimmt und niedrig über dem Wasser hinfliegt. Im Auffluge lässt er seine starke, unangenehme Stimme hören, bei welcher die einzelnen Töne schnell hinter einander folgen. Den grössten Theil des Tages sitzt er auf einem guten Aussichtspunkte, dem Aste eines niedrigen Uferbaumes, zieht bei drohender Gefahr den Kopf in die Höhe und fliegt pfeilschnell davon. Während er im Flussgebiete des Kapoeas häufig vorkommt, habe ich ihn im Gebiete des Mahakkam nur einmal, und zwar Mitte September 1896 am Bruny-Flusse angetroffen.

Am Koetei-Flusse, unterhalb den Fällen des Mahakkam, habe ich einige Exemplare zu Gesicht bekommen. Doch hier war ihr Betragen ein ganz anderes! Mitte Mai 1897, als ich in der Morgendämmerung in einem Boote durch die überschwemmten Uferwälder des Koetei-Flusses hinfuhr, bemerkte ich in den höchsten Baumkronen ein Männchen, einen starken, pfeifenden und klagenden Ton ausstossend. Auf diesen Lockruf flog das Weibchen herbei, schien das Männchen zu necken und flog dann wieder davon. Das Männchen verfolgte es, setzte sich auf einen andern grossen Baum und schrie von Neuem, bis sich das Weibchen abermals näherte. Bei diesem Jagen, das ich einige Tage hinter einander, aber nur am frühen Morgen bemerkt habe, entfernten sich die beiden Exemplare bis auf einige hundert Schritte in den Wald hinein. Nach diesem eigenthümlichen Benehmen schliesse ich, dass sich die Vögel in der Paarungszeit befanden".

69. *Ceyx Dillwynni.*

Ceyx Dillwynni Sharpe, P. Z. S. 1868, p. 591; Salvad. Ucc. Born p. 99; Everett, L. B. Born. p. 160; Sharpe, Ibis 1890, p. 19.

Four specimens from Nanga Raoen, Poetoes Sibau and Poelau and five from the Upper Mahakkam (1898—99). — Iris black, bill and feet coral-red; bill of young specimens black.

Hab. Nias and Borneo.

70. *Ceyx euerythra.*

Ceyx rufidorsa (nec Strickl.) Everett, L. B. Born. p. 159.
Ceyx euerythra Sharpe, Cat. B. Br. Mus. XVII. p. 179.

Two specimens from Pontianak and Poelau. — Iris dark brown, bill and feet coral-red.

Hab. Malay Peninsula, Sumatra, Borneo and the Southern Philippines.

71. *Halcyon coromandus.*

Alcedo coromanda Lath. Ind. Orn. I, p. 252 (1790).
Callialcyon coromanda Salvad. Ucc. Born. p. 101.
Halcyon coromanda Everett, L. B. Born. p. 160; Sharpe, Ibis 1890, p. 20.

An adult male from Pontianak, and another from Long Bloe (Upper Mahakkam).

Hab. Eastern and south-eastern Asia, Formosa, Philippines, Sunda Islands, Celebes and Sanghi [1]).

72. *Halcyon pileatus.*

Alcedo pileata Bodd. Tabl. Pl. Enl. p. 41 (1783).
Entomobia pileata Salvad. Ucc. Born. p. 102.
Halcyon pileata Everett, L. B. Born. p. 160; Sharpe, Ibis 1890, p. 20.

Eight specimens from Long Bloe (Upper Mahakkam). — Iris dark brown, bill and feet coral-red. — Contents of stomach: small insects.

Hab. From India eastward to China, and south-eastward through the Malay Peninsula and the Sunda Islands to Celebes.

»Am oberen Mahakkam keine seltene Erscheinung" (von Berchtold).

73. *Halcyon concretus.*

Dacelo concreta Temm. Pl. Col. 346 (1825).
Caridagrus concretus Salvad. Ucc. Born. p. 102.
Halcyon concretus Everett, L. B. Born. p. 161; Sharpe, Ibis 1890, p. 21.

An adult female from Mount Kenepai, and two from Long Bloe (Upper Mahakkam). — Iris dark brown, bill yellow, culmen black, feet yellow.

Hab. Malay Peninsula, Sumatra and Borneo.

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1) The birds from Celebes and Sanghi are mentioned as subspecifically distinct (*Halcyon coromanda rufa*) by Meyer and Wiglesworth in their recent work on the birds of Celebes, p. 280.

74. *Carcineutes melanops.*

Halcyon melanops Bp. Consp. I, p. 154 (1850).
Lacedo melanops Salvad. Ucc. Born. p. 104.
Carcineutes melanops Everett, L. B. Born. p. 161; Sharpe, Ibis 1890, p. 21.

Four specimens from Mounts Kenepai and Liang Koeboeng, Poelau, and from Long Bloe (Upper Mahakkam). — Iris dark brown, bill minium-red, feet yellowish green. — Contents of stomach: small beetles.

Hab. Borneo generally, but nowhere common.

Coracidae.

75. *Eurystomus orientalis.*

Coracias orientalis Linn. Syst. Nat. I, p. 159 (1766).
Eurystomus orientalis Salvad. Ucc. Born. p. 105; Everett, L. B. Born. p. 165; Sharpe, Ibis 1890, p. 21.

Five specimens from Pontianak, Mount Liang Koeboeng and Nanga Raoen, and one from the Upper Mahakkam. — Iris brown, bill red, with black tip to the upper mandible, feet red.

Hab. Eastern part of British India, Malay Peninsula, Sumatra, Java, Borneo and the Philippines.

Eurylaemidae.

76. *Calyptomena viridis.*

Calyptomena viridis Raffl. Trans. Linn. Soc. XIII, p. 295 (1822); Salvad. Ucc. Born. p. 106; Everett, L. B. Born. p. 150; Sharpe, Ibis 1889, p. 438.

Numerous specimens from Roema Manoeal and the Liang Koeboeng, also from Long Bloe, Upper Mahakkam. — Iris black, bill black, base of lower mandible yellow, feet bluish green, soles ochre. — Contents of stomach: pieces of the fruits of *Urostigma.*

Hab. From Tenasserim through the Malay Peninsula to Sumatra (with the inclusion of Nias and the Batu Islands), and Borneo.

77. *Calyptomena Hosei.*

Calyptomena Hosei Sharpe, Ann. & Mag. Nat. Hist. (6) IX, p. 249, 1892; id. Ibis 1892, p. 438, pl. X; Hose, Ibis 1893, p. 404; Sharpe, Ibis 1893, p. 549.

Numerous specimens, representing both sexes, were obtained in the dense mountain forests of the Liang Koeboeng range, a female on the eastern foot of the latter, in the valley of the river Siniai, and a young female from Nanga Raoen. — Iris dark brown, bill black, feet olive green. In the half-grown immature female the blue central streak on breast and abdomen is entirely wanting.

Hab. Borneo (Mountains of Sarawak and Liang Koeboeng, but not found on Mount Kenepai, though this latter is much nearer to Sarawak than the Liang Koeboeng).

78. *Eurylaemus javanicus.*

Eurylaemus javanicus Horsf. Trans. Linn. Soc. XIII, p. 179 (1822); Salvad. Ucc. Born. p. 107; Everett, L. B. Born. p. 150; Sharpe, Ibis 1889, p. 439.

Five specimens from Mounts Kenepai and Liang Koeboeng and one from the Upper Mahakkam. — Iris bluish white, bill blue, tip and edge black, followed by a green band, feet flesh-color.

Hab. From Tenasserim throughout the Malay Peninsula, Sumatra, Java and Borneo, where it is spread over the whole island.

79. *Eurylaemus ochromelas.*

Eurylaemus ochromelas Raffl. Trans. Linn. Soc. XIII, p. 297 (1822); Salvad. Ucc. Born. p. 108; Everett, L. B. Born. p. 150; Sharpe, Ibis 1889, p. 439.

A great number of specimens from Pontianak, Roema Manoeal, Mount Kenepai, Mount Liang Koeboeng, Nanga Raoen, Poetoes Sibau, and Poelau, also from Long Bloe (Upper Mahakkam). In the male the black cross-band on the breast is complete, while in the female it is interrupted on the centre of the breast. — Iris sulphur-yellow, bill in life cobalt, tip pale green (after death the cobalt-color changes into green and becomes black in dried skins), edge of upper mandible black, lower mandible green, feet pale flesh-color.

Hab. From Tenasserim throughout the Malay Peninsula to Sumatra and Borneo, where it is generally distributed.

80. *Cymborhÿnchus macrorhynchus.*

Todus macrorhynchus Gm. Syst. Nat. p. 446 (1788).
Cymborhynchus macrorhynchus Salvad. Ucc. Born. p. 109; Büttik. N. L. M. 1887, p 43; Everett, L. B. Born. p. 151; Sharpe, Ibis 1889, p. 440.

A great number of adult, immature and young specimens of both sexes from Pontianak, Poetoes Sibau, Nanga Raoen, the Siniai Valley, and Poelau. — Iris green in adult birds, in younger specimens purplish gray or brown; bill in adult birds uniform cobalt-blue, in younger specimens pale green, edge blue, followed by yellow, in quite young birds pale green with blackish tip, lower mandible with blue edgings, followed by green, and yellow in the centre, in young specimens entirely rosy; feet purplish blue. Two fledged young birds have breast and abdomen barred with rosy-red and grayish brown, but in the male the throat is blackish, while in the female this part is yellowish white, which color is separated from the barred breast by a dusky blackish broad bar across the chest. The red color on the rump and the white shoulder-coverts are plainly developed, but the black color of the upper surface yields to a brownish tinge and is destitute of any gloss. The white on the inner edge of the outer tail-feathers varies very much in extent and in some specimens is even entirely wanting. This difference seems to me quite individual, and not due to locality, age or sex of the bird (see also my explanations in N. L. M. 1887, p. 43).

Hab. Malay Peninsula, Sumatra, Banka and Borneo, where it is spread over the whole island, keeping by preference to the banks of the rivers.

The collecting list of Mr. von Berchtold contains the following field-notes about the habits, the nest and the eggs of this bird:

»Diese ruhigen und wenig scheuen Vögel leben stets paarweise zusammen. Wenn getrennt locken sie sich so lange, bis sie sich wieder zusammengefunden haben. Durch ihre unangenehme, krächzende Stimme »queck, queck, queck" wird man leicht auf ihr Vorhandensein aufmerksam gemacht. Sie fliegen wellenförmig und nie hoch über dem Flussspiegel von einem Baume zum andern. Das Vogelpaar baut sein ziemlich grosses Nest hängend und in Kugelform, doch sehr unordentlich an herabhängenden Lianen oder an alleinstehenden Bäumchen an den Ufern der Flüsse. Der Eingang zum Neste ist mit einem Schutzdach versehen. Mitte März fand ich am Landack-Flusse ein Nest mit drei leichtschmutzig gelben, etwas röthlich angehauchten und mit unregelmässigen, sepiabraunen Flecken versehenen Eiern. Desgleichen am Boengan-Flusse [1]) ein Nest mit zwei Eiern (16 Juli 1896)".

81. *Corydon sumatranus.*

Coracias sumatranus Raffl. Trans. Linn. Soc. XIII, p. 303 (1822).
Corydon sumatranus Salvad. Ucc. Born. p. 111; Everett, L. B. Born. p. 151; Sharpe, Ibis 1889, p. 440.

Three specimens from Mount Liang Koeboeng and Poelau (Sibau River). — Iris coffee-brown, bill and naked space round the eye flesch-color, feet brown.

Hab. From Tenasserim through the Malay Peninsula to Sumatra and Borneo, where it is found throughout the island.

Caprimulgidae.

82. *Batrachostomus javensis.*

Podargus javensis Horsf. Trans. Linn. Soc. XIII, p. 141 (1822).
Podargus cornutus Temm. Pl. Col. 159 (1823).

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1) Tributary of the Upper Kapoeas.

Batrachostomus javensis Salvad. Ucc. Born. p. 112; Hartert, Cat. B. Br. Mus. XVI, p. 640.
Batrachostomus cornutus Tweedd. P. Z. S. 1877, p. 432, pl. 46; Everett, L. B. Born. p. 165.

A single specimen (red phase), collected on Mount Baloe, at the head of the Sekajam River, at a height of 800 meter by Mr. Westenenk (in spirits). — Iris yellow, bill yellowish horn-color, feet pale flesh-color.

Hab. Sumatra, Banka, Borneo, where it seems to be generally distributed, and Java.

83. *Batrachostomus stellatus.*

Podargus stellatus Gould, P. Z. S. 1837, p. 43.
Batrachostomus stellatus Gray, Gen. B. I, p. 45; Salvad. Ucc. Born. p. 113; Everett, L. B. Born. p. 165.
Podargus parvulus Schleg. J. f. O. 1856, p. 460; id. Handl. Dierk. pp. 224, 481, Atlas pl. II, fig. 15.

A single specimen (N° 199) collected in low jungle at the foot of Mount Kenepai. — Iris orange yellow, bill horny yellow, feet yellowish flesh-color.

Hab. Malay Peninsula, Sumatra, Banka and Borneo, where it seems to be distributed over the whole island.

84. *Batrachostomus auritus.*

Batrachostomus auritus (Gray) Sharpe, P. Z. S. 1875, p. 99; Everett, L. B. Born. p. 165; Hart. Cat. B. Br. M. XVI, p. 637.

An adult male, and a nestling (Dr. Nieuwenhuis, 5 January 1899).

The adult bird agrees perfectly with specimens from Sumatra. Wing 275 mm. — Iris light brown in adult and young.

Hab. Malay Peninsula, Sumatra and Borneo.

85. *Batrachostomus Harterti.*

Batrachostomus Harterti Sharpe, Ibis 1892, p. 323; Hartert, Cat. Birds Br. Mus. XVI, p. 638, pl. XIV.

An adult female from Mount Liang Koeboeng (890 meter). — Iris nut-brown, bill brown, yellowish green at the base, feet flesh-color. Wing 22 cm. (8,8 inches), tail 16,3 cm. (6,4 inches).

This bird agrees with description and plate of *B. Harterti* as to the pattern, but is very strongly tinged with ashy and in this way it differs strongly from the typical specimen as described and figured in the above mentioned catalogue.

Hab. Borneo: Mount Dulit and Liang Koeboeng.

86. *Lyncornis Temminckii.*

Lyncornis Temminckii Gould, Icon. Av. pt. 2 (1838); Bp. Consp. I, p. 62; Salvad. Ucc. Born. p. 115; Everett, L. B. Born. p. 153.

One specimen (♀) from Roema Manoeal, and another from Long Bloe, Upper Mahakkam. — Iris black, bill and feet brown.

Hab. Malay Peninsula, Sumatra and Borneo.

87. *Caprimulgus macrurus.*

Caprimulgus macrurus Horsf. Trans. Linn. Soc. XIII, p. 142 (1822); Salvad. Ucc. Born. p. 117; Everett, L. B. Born. p. 153; Sharpe, Ibis 1890, p. 22.

Three males from Pontianak. — Iris dark brown, bill and feet black.

Hab. From the Malay Peninsula through the Malay Archipelago and New Guinea to Australia.

88. *Caprimulgus jotaka.*

Caprimulgus jotaka Temm. & Schleg. Faun. Jap. Aves, p. 37, pl. 12 (1847); Hartert, Cat. B. Br. Mus. XVI, p. 522.

A female from Smitau. — Iris and bill black, feet brown.

Hab. Eastern Asia, from Mantchuria through China and Japan to Burmah; migrating in winter to Malacca and the Sunda Islands.

Cypselidae.

89. *Micropus subfurcatus.*

Cypselus subfurcatus Blyth, Journ. As. Soc. Beng. XVIII, p. 807 (1849); Salvad. Ucc. Born. p. 118.

Micropus subfurcatus Hartert, Cat. B. Br. Mus. XVI, p. 456.

A male specimen from Pontianak. — Iris dark brown, bill black, feet black, tinged with lilac.

Hab. From Cochin China through Malacca to Sumatra and Borneo.

90. *Collocalia fuciphaga.*

Hirundo fuciphaga Thunbg. Act. Holm. XXXIII, p. 151, pl. 4 (1772).
Collocalia fuciphaga Salvad. Ucc. Born. p. 120; Everett, L. B. Born., p. 152; Sharpe, Ibis 1889, p. 23.

A specimen from Pontianak in spirits and a skin from Nanga Raoen, and two specimens from the Upper Mahakkam. — Iris dark brown, bill black, feet purplish flesh-color.

Hab. From the Continent through Malacca and the Sunda Islands; rather common throughout Borneo.

91. *Collocalia Linchi.*

Collocalia Linchi Horsf. & Moore, Cat. B. Mus. E. I. Comp. I, p. 100 (1854); Salvad. Ucc. Born. p. 121; Everett, L. B. Born. p. 152; Sharpe, Ibis 1890, p. 23.

Two specimens (N° 728 in spirits and N° 874 skin) from Mount Liang Koeboeng and an adult male from the Upper Mahakkam. — Iris and bill black, feet brown. N° 874 was caught in a cave of the large grotto which formed my abode on Mount Liang Koeboeng. The nest was stuck to the ceiling of the cave and exists of a filthy mass of black rootlets. The nest is quite flat and without a cup. The egs could not be obtained.

Hab. All over the Sunda Islands, including the Andamans and Nicobars.

92. *Macropteryx longipennis.*

Hirundo longipennis Rafin. Bull. Soc. Phil. III, p. 153 (1804).
Dendrochelidon longipennis Salvad. Ucc. Born. p. 122; Sharpe, Ibis 1890, p. 24.
Macropteryx longipennis Everett, L. B. Born. p. 152.

A number of specimens from Smitau, one from Pontianak and one from the Upper Mahakkam. — Iris and bill black, feet gray.

Hab. From Tenasserim through the Malay Peninsula and the Sunda Islands.

93. *Macropteryx comata.*

Cypselus comatus Temm. Pl. Col. 268 (1824).
Dendrochelidon comata Salvad. Ucc. Born. p. 123; Sharpe, Ibis 1890, p. 23.
Macropteryx comatus Everett, L. B. Born. p. 152.

One specimen from Sanggau, two from the foot of Mount Kenepai, one from the Upper Sibau River and six from Long Bloe (Upper Mahakkam). — Iris dark brown, bill black, feet brown.

Hab. Malay Peninsula, the Sunda Islands, Timor, Celebes and the Philippines.

94. *Chaetura gigantea.*

Cypselus giganteus Temm. Pl. Col. 364 (1825).
Chaetura gigantea Scl. P. Z. S. 1865, p. 608; Everett, L. B. Born. p. 151; Hartert Cat. B. Br. M. XVI, p. 475.
Hirundinapus giganteus Salvad. Ucc. Born. p. 124.

An adult male (Dr. Nieuwenhuis, 9 January 1899).

This specimen has the whole under surface considerably darker than the type-specimen figured by Temminck and said to be from Java (Bantam, sent by van Hasselt), but a specimen from Sumatra (Coll. Dr. Klaesi) is intermediate, showing the underparts not as light as the Javan specimen, but lighter than that from Borneo, which is almost black instead of smoky black.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

Hirundinidae.

95. *Hirundo rustica.*

Hirundo rustica L. Syst. Nat. I, p. 343 (1766); Sharpe, Cat. B. Br. M. X, p. 128.

Hirundo gutturalis (Scop.) Salvad. Ucc. Born. p. 125; Everett, L. B. Born. p. 134.

Two females in moult from the Upper Mahakkam (Dr. Nieuwenhuis, 29 December 1898 and 6 January 1899).

96. *Hirundo javanica.*

Hirundo javanica Sparrm. Mus. Carlsr. t. 100 (1789); Temm. Pl. Col. 83, fig. 2; Salvad. Ucc. Born. p. 126; Everett, L. B. Born. p. 134; Sharpe, Ibis 1889, p. 430.

Two not fully adult females with but very slight traces of red on the fore-head, collected at Nanga Raoen (May 21st 1894), and ten specimens from the Upper Mahakkam. — Iris dark brown, bill black, angle of mouth yellow, feet lead-color.

Hab. Southern India and Ceylon, Malay Peninsula, through the Malay Archipelago and Southern Philippines to the Moluccas and New Guinea.

Muscicapidae.

97. *Hemichelidon sibirica.*

Muscicapa sibirica Gm. S. N. I, p. 936 (1788).
Hemichelidon sibirica Everett, L. B. Born. p. 126; Sharpe, Ibis 1894, p. 543 (Mount Mulu).

A female (N°. 698) from the western slope of Mount Liang Koeboeng, March 22d 1894. — Iris dark brown, bill black, lower mandible whitish at the base, mouth intensely yellow, feet sooty brown.

This specimen agrees in every respect with a specimen in the Leyden Museum, collected by S. Müller in the highlands of Western Sumatra. Both these specimens have the bill obviously larger than our three specimens from the Continent, but this difference I do not consider as sufficient to base a new species upon.

Hab. Eastern Siberia, Himalaya Mountains, Burma, Sumatra, Palawan and Borneo. On the latter Island it has been collected on Mount Mulu by Mr. Hose's hunters.

98. *Alseonax latirostris.*

Muscicapa latirostris Raffl. Trans. Linn. Soc. XIII, p. 312 (1822).
Alseonax latirostris Salvad. Ucc. Born. p. 129; Sharpe, Ibis 1889, p. 195; id. id. 1890, p. 275.

Three females, obtained at Smitau (December 6th and 11th) and Mount Kenepai (January 31st), and three specimens from the Upper Mahakkam. — Iris black, bill black, lower mandible whitish at the base, mouth yellow, feet black.

Hab. Eastern Siberia, Japan, China, a winter visitor in India, Ceylon, Burma, Malay Peninsula, Penang, Sumatra, Java, Borneo and the Philippines.

99. *Erythromyias Mülleri.*

Muscicapa Mülleri Blyth, Ibis 1870, p. 166; Salvad. Ucc. Born. p. 129.
Erythromyias Mülleri Sharpe, Cat. B. Br. Mus. IV, p. 200; Hose, Ibis 1893, p. 396; Sharpe, Ibis 1893, p. 551; id. id. 1894, p. 421.

A great number of specimens from the Liang Koeboeng range, about 800 meters above the level of the sea. This bird is frequenting the undergrowth of the high forest and has a nice sweet note. — Iris black, bill black, feet pale flesh-color or dirty white.

The adult female, having not been described as yet, resembles the adult male in the color of the lower surface, but the upper surface is olive-brown instead of black, the longitudinal white band on the wing much less distinct, and the white superciliar stripe wanting. The tail is black with white bases to all but the innermost tail-feathers, like in the male. Immature birds are reddish brown above and have the greater and median wing coverts broadly tipped with rufous.

Hab. Sumatra and Borneo: Banjermassin (Schwaner), West-Borneo (Crookewit), mountains of Sarawak (Hose, Everett).

100. *Xanthopygia cyanomelana.*

Muscicapa cyanomelana Temm. Pl. Col. III, pl. 470; Temm. & Schl. Faun. Jap. p. 47 (1829).

Muscicapa melanoleuca Temm. & Schl. Faun. Jap. Aves, pl. 17 D.
Muscicapa gularis Temm. & Schl. Faun. Jap. Aves, pl. 16 (♀).
Xanthopygia cyanomelaena Everett, L. B. Born. p. 128; Sharpe, Ibis 1889, p. 196.
Niltava cyanomelaena Seebohm, Birds Jap. Emp. p. 59.

Six males and three females were collected on Mount Kenepai, from 17—30 January 1894. Most of the males are in transitional stage, and none of them have assumed the full breeding plumage. The females are characterized by a white spot on the centre of the throat. — Iris dark brown, bill black with the base of lower mandible whitish in the female, feet gray.

Hab. Manchuria, North China and Japan, only a winter visitor in Borneo.

101. *Siphia Everetti.*

Plate 14 (ad. ♂, ad. ♀, immature ♂ and young ♂).

Siphia Everetti Sharpe, Ibis 1890, p. 366; Hose, Ibis 1893, p. 399.

Thirteen specimens of both sexes, from the fledged young to the fully adult bird, obtained on Mount Kenepai, at an altitude of 600 meter, and in the thick primeval forest on the western slope of Mount Liang Koeboeng (800 meter).

As there is not yet published a full description of this species, and Dr. Sharpe having compared it, in his short diagnosis, with *S. cyanea* (Hume) 1) from Tenasserim, which is very rare in collections, I venture to give here a more detailed description.

Adult male. Upper surface deep indigo-blue, more lively on crown and upper wing-coverts, a broad frontal band extending above the eye cobalt-blue, lores and a narrow base of the frontal band black, wing black, all the quills, with the exception of the two outermost primaries, edged with the color of the back; central tail-feathers like the back, the outer pairs black on the inner and blue only on

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1) *S. cyanea* (Hume, 1877) has turned out to be *S. concreta* (Müller, 1835), see N. L. M. Vol. XVIII, p. 221.

the outer web; sides of head and neck, chin, throat, chest and sides of breast blue like the upper surface, centre of breast and flanks more purplish gray, intermixed with white; abdomen, vent and under tail-coverts pure white, as well as a long tuft of fluffy feathers on the sides of the rump; tail and wing unterneath black, the quills faintly edged on their inner webs with smoky brown, under wing-coverts dark gray, the outer parts slightly tinged with blue, edge of wing entirely blue. Iris dark brown, bill black, feet bluish gray, soles orange-yellow. Wing 8—8,4 cm., tail 5,5, tarsus 2, culmen 1,8.

Adult female. Upper surface and anterior part of lower surface russet brown, strongly tinged with ferruginous on forehead, superciliary region, lores, sides of head, chin and throat; wing-coverts like the back, quills dark brown, the inner primaries and still more so the secondaries broadly edged with chestnut-brown, upper tail-coverts likewise chestnut-brown, tail dark brown, the central pair above rufous brown, the lateral pairs edged with rufous brown on the outer web and with white on the inner, the white margin being very narrow if not entirely absent on the outermost pair and rather broad on the three following pairs, but not reaching entirely to the tip. Moreover the third, fourth and fifth pair are margined with leaden blue on the basal two thirds of the outer web, while on the fourth pair this blue color borders a white longitudinal spot. Centre of throat pure white, partly concealed by the tips of the posterior feathers being tipped with rufous brown; breast, flanks and thighs olive-brown; centre of breast, abdomen, vent and under tail-coverts white, more or less spotted and streaked with the color of breast and flanks; under wing-coverts white, varied with fulvous, inner web of the quills margined with ashy white. Color of iris, bill and feet as in the male. The female is very much like male and female of *Rhinomyias gularis* Sharpe in its general coloration and the white gular patch, but is easily distinguished from the latter by the white pattern on the tail-feathers and the absence of the isabellina superciliary stripe. Wing 8 cm., tail 5,3—5,5; tarsus 2, culmen 1,8.

Two fledged young birds (♂ and ♀), killed April 2d and 5th, probably just after having left their nest, are dark brown, back and wing-coverts with a large rusty brown subterminal spot on each feather; the quills broadly margined with the same rusty brown, which color predominates also on the whole head, where it forms broad shaft-streaks, as well as on fore-neck and chest. The centre of throat is already showing the white half-concealed spot of the adult female, the abdomen and under tail-coverts are white, but strongly suffused with dark brown. In both, male 1) and female, the white pattern on the tail-feathers is indicated, though they hardly exceed a centimetre in length.

The adult stage in male and female seems to be attained by a slow change of color rather than by a moult, beginning at the base and slowly proceeding towards the tip of the feather.

The plumage of the adult is first acquired on back, upper wing-coverts and breast, and the last remnants of the rufous spots are found, as is shown by some specimens before me, at the base of the bill and on the superciliary region.

This species belongs to the larger forms of the genus, and especially the bill is rather clumsy. Like its nearest ally, *S. concreta* from Tenasserim, it is only found in mountain-forests.

Hab. Borneo: Mount Penrisen (Everett), Mount Dulit (Hose), Mounts Kenepai and Liang Koeboeng.

102. *Siphia unicolor*.

Cyorni sunicolor Blyth, J. A. S. B. XII, pp. 941 and 1007 (1843); Oates, Faun. Br. Ind. Birds II, p. 22.

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1) The young bird noted as a male might after all be a female, on account of the white pattern on the tail-feathers, which is entirely absent in the adult male.

Cyornis cyanopolia Blyth, Ibis 1870, p. 165 (ex Boie M. S. in Mus. Lugd.); Salvad. Ucc. Born. p. 132.
Siphia unicolor Sharpe, Cat. B. Br. Mus. IV, p. 444; Sharpe, Ibis 1894, p. 542.

An adult male (N° 983) from the western slope of Mount Liang Koeboeng. — Iris dark brown, bill black, feet purplish. This bird was shot in low bamboo-jungle at an altitude of 850 meter above the sea-level.

Oates (l. c.) seems to doubt somewhat the identity of the Malay *S. cyanopolia* with *S. unicolor* from the Continent, saying that it is a much brighter bird than *S. unicolor*, but having no specimen from the Continent to compare with our specimens from Java and Borneo, and Sharpe (Ibis 1894, p. 542) identifying a specimen from Mount Mulu with *S. unicolar*, I prefer te follow this latter authority.

Hab. Eastern Himalayas to the Malay Peninsula, Java and Borneo.

103. *Siphia elegans.*

Muscicapa elegans Temm. Pl. Col. III, pl. 596, fig. 2 (♂)[1].
Cyornis elegans Walden, Ibis 1872, p. 373; Salvad. Ucc. Born. p. 130; Blasius, Verein. Naturw. Braunschw. 1881, p. 34.
Siphia elegans Sharpe, Cat. B. Br. Mus. IV, p. 447; Everett, L. B. Born. p. 132; Sharpe, Ibis 1889, p. 205.
Cyornis turcosa Brügg. Abh. Nat. Ver. Brem. V, p. 457.
Siphia turcosa Sharpe, Cat. B. Br. Mus. IV, p. 453; id. Ibis 1893, p. 551; id. id. 1894, p. 421.

An adult female from Smitau, four males and two females from Nanga Raoen and four specimens from the Sibau River; also from the Upper Mahakkam. Found in bamboo-jungle and brushwood of abandoned native plantations. — Iris dark brown, bill black, feet purplish gray.

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1) Dr. Sharpe, Cat. B. IV, p. 447, mentions *Muscicapa cantatrix* ♀ Temm. Pl. Col. III, pl. 226, fig. 2, as belonging to the synonymy of *S. elegans*. This is undoubtedly an error, the bird in question, which still makes part of the Leyden collections, being a female in transitional stage of plumage of *S. banyumas* (Horsf.) = *Muscicapa cantatrix* Temm. The pure white lores combined with the red color of the entire lower surface leave no doubt as to its identitv with the female of *S. banyumas*.

This species is exclusively an inhabitant of the lower country. In the Kapoeas-region we never met with it at any considerable elevation above the plain or the bottom of the valleys, nor is any instance known in literature of its occurrance on the hitherto explored mountains of Borneo, except a female stated by Dr. Sharpe (Ibis 1889, p. 205) to be found by Mr. Whitehead »on Kina Balu at 3000 feet".

I have, however, very strong reasons to doubt the identity of the mentioned female from Kina Balu with *S. elegans*. Nay, from the synonymy of *S. elegans* in the Catalogue of Birds we learn that Dr. Sharpe considers the female of this species to have a white loral spot, as the learned author adds to this synonymy *Muscicapa cantatrix* Temm. Pl. Col. III, pl. 226, fig. 2 (♀) and *Cyornis banyumas* Tweedd., P. Z. S. 1878, p. 615 (♀), both having white lores. The first is, however, as is proved by the original specimen still preserved in our Museum, nothing but an immature female of *S. banyumas*, and the second has afterwards been identified by Mr. Everett (Ibis 1895, p. 25) as the female of *S. Lemprieri* Sharpe. The female in question, from Kina Balu, 3000 feet, very probably belongs to *S. coeruleata* (Bp.), which is, at least for the basin of the Kapoeas, unquestionably a mountain form, of which I collected females in different stages of plumage, all with more or less distinct rufous or whitish lores.

The real females of *S. elegans* (two of them were killed together with their males) have no loral spot at all and can only be distinguished from the males by the want of the blue color on chin and throat, which parts are of a somewhat paler rufous than the chest. They can by no means be distinguished from *S. turcosa*, which is, in fact, nothing but the female of our *S. elegans*, a conclusion which gets still more strength by the fact that *S. turcosa* is likewise an inhabitant of lower countries and was never found above an elevation of 1000 feet.

Hab. Malacca, Sumatra and Borneo, where it is very widely distributed [1]).

104. *Siphia coeruleata.*

Schwaneria coeruleata Bp. Rev. et Mag. de Zool. 1857, p. 54 (e. Temm. M. S.); Salvad. Ucc. Born. p. 134.
Cyornis rufifrons Wallace, P. Z. S. 1865, p. 476; Salvad. Ucc. Born. p. 131; Sharpe, Ibis 1878, p. 416 (partim).
Siphia coeruleata Sharpe, Cat. B. Br. Mus. IV, p. 451; Everett, L. B. Born. p. 133.
(?) *Siphia elegans* (part.) Sharpe, Ibis 1889, p. 205 [2]).

Six adult males and a nestling of the same sex, and five females in more or less fully developed dress, all obtained in the mountain-forests of the Liang Koeboeng-range, not below 800 meter. — Iris dark brown, bill black, feet in fresh specimens purplish, in dry state pale brown, but by far not so whitish as in our typical specimen.

This species is allied to *S. banyumas*, having the lower surface entirely orange rufous, the centre of the abdomen only being white in some specimens, but it differs from the latter in having the black chin-spot very small and the moustaches dark blue instead of blackish. Much more important than between the males the difference is between the adult females. In *S. banyumas* the adult female much resembles the male in color, but is provided with a conspicuous white loral spot and instead of the large black chin-spot and ditto beard-stripes these parts are rufous like the rest of the under surface. The adult female of *S. coeruleata* agrees with that of *S. banyumas* as to the want of a dark chin-spot, but the upper surface is not entirely blue like in the male, but olive-brown, with a darker, more grayish

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1) Dr. Sharpe includes Java in the geographical distribution of this species, probably on account of a female in the collection of the British Museum, but for the above developed reasons I guess that the specimen in question is an immature female of *S. banyumas*.

2) The female of *S. elegans* mentioned at the quoted place will very likely prove to belong to the present species (see my remarks on this subject antea under the head of *S. elegans*).

tinge on the crown, and the blue color is reduced to the upper tail-coverts and the outer webs of the tail-feathers; moreover the lores (and in some specimens also a ring round the eyes) are rufous instead of pure white. In younger females the blue color on upper tail-coverts and tail are entirely wanting. The young male does not pass through the color of the female as is clearly shown by our above mentioned nestling, which, though spotted with rufous all over the upper surface, has the very short quills and upper wing-coverts already edged with the blue color of the adult bird. The entire lower surface of this nestling is orange rufous with a narrow black margin to some of the feathers, but no trace of a black chin-spot can be seen. The feet in the dried skin of this nestling are whitish yellow, like in the type of the species in our Museum, which is, by the way, not a fully adult bird, as it has some rusty red spots to the tips of the greater wing-coverts.

I may not neglect here to say that my series of males from the Liang Koeboeng does not absolutely agree with the type, this latter showing a slightly more purplish tinge on the upper surface, and a more distinct cobalt color on the rump, while the numerous black feathers on the chin indicate a larger black chin-spot than in any of my specimens from the Liang Koeboeng-range. The type being, however, not fully adult (having a few rusty tips to the wing-coverts) and in worn plumage, I dare not keep them separate on account of the above mentioned differences. Unfortunately I cannot dispose of any specimen of the so-called *S. rufifrons* from other localities of Borneo and therefore I am unable to tell whether this latter form agrees more with the typical specimen of our *S. coeruleata* or with my specimens from Liang Koeboeng.

Hab. Borneo: Sarawak, and Central and Southern Borneo (Schwaner).

105. *Siphia beccariana.*

Plate 15 (ad. ♂, ad. ♀ and immature ♂).

Cyornis beccariana Salvad. Atti R. Acad. Torino, III, p. 533 (1868); id. Ucc. Born. p. 131.
Siphia beccariana Sharpe, Cat. B. Br. Mus. IV, p. 452; Everett, L. B. Born. p. 133; Sharpe, Ibis 1892, p. 435; Hose, Ibis 1893, pp. 546, 551.

An adult female and an immature male from Mount Kenepai, an adult male from the Upper Sibau River, and a female from the Upper Mahakkam. A species, found in the forest of the lower mountain-regions. — Iris dark brown, bill black, feet purplish in the adult male, pale blue in the adult female, gray in the young male. This latter has the color of the adult female, suffused with rusty red, especially on the face, and with some smalt-blue feathers making their appearance on the rump, leaving no doubt as to the systematic position of the specimen.

Hab. Borneo: Hill regions of Sarawak and basin of the Upper Kapoeas.

106. *Stoparola thalassinoides.*

Hypothymis thalassina Bp. (nec Swains.) Consp. I, p. 320.
Stoparola thalassinoides Cab. Mus. Hein. I, p. 53 (note) (1850); Salvad. Ucc. Born. p. 132; Sharpe, Ibis 1889, p. 205; Everett, L. B. Born. p. 132.

An adult male from the Liang Koeboeng-range. — Iris, bill and feet black.

Hab. Malay Peninsula, Sumatra and Borneo.

107. *Hypothymis azurea.*

Muscicapa azurea Bodd. Tabl. Pl. Enl. p. 41.
Hypothymis azurea Salvad. Ucc. Born. p. 133.
Hypothymis occipitalis Sharpe, Cat. B. Br. Mus. IV, p. 274; id. Ibis 1889, p. 197; Everett, L. B. Born. p. 128.

A great number of specimens from Pontianak, Sanggau, Roema Manoeal, Mount Kenepai, Liang Koeboeng (western slope and top-plateau) and Poelau; also from the Upper and Lower Mahakkam. — Iris black, eyelid blue, bill in life ultramarine, tip black, feet dark blue. Found in low jungle as well as in high forest.

Hab. India, Malacca, the whole Malay Archipelago and the Philippines.

108. *Culicicapa ceylonensis.*

Platyrhynchus ceylonensis Swains. Zool. Illustr. Ser. I, pl. 13.
Culicicapa ceylonensis Salvad. Ucc. Born. p. 134; Sharpe, Ibis 1889, p. 202; Everett, L. B. Born. p. 131.

Eight specimens from Mount Kenepai and the western slope of the Liang Koeboeng, where it is quite a forest-bird. Male and female are alike in color, but the male is a trifle larger than the female, the wing of this latter measuring 5,8 cm. — Iris dark brown, bill black, lower mandible whitish, feet ochraceous.

Hab. From India and Ceylon through the Malay Peninsula to Sumatra, Nias and Batu Islands, Java and Borneo.

109. *Rhipidura javanica.*

Muscicapa javanica Sparrm. Mus. Carls. III, pl. 75 (1789).
Leucocerca javanica Salvad. Ucc. Born. p. 135.
Rhipidura javanica Sharpe, Ibis 1889, p. 199; Everett, L. B. Born. p. 129; Büttik. N. L. M. 1893, p. 97.

Ten specimens from Smitau, Roema Manoeal, Nanga Raoen, Poetoes Sibau, Poelau and the Upper Mahakkam, but neither on Mount Kenepai nor Liang Koeboeng, where it is represented by *R. perlata*. Found in old rice-plantation and brushwood, very often in the immediate vicinity of native houses. — Iris black, bill and feet grayish black.

Hab. South-eastern corner of the Continent, including southern China, Malay Peninsula, Sumatra, Java and Borneo, where it seems to be restricted to the plains.

110. *Rhipidura perlata.*

Rhipidura perlata S. Müll. Verh. Land- en Volkenk. p. 185 (1839—44); Everett, L. B. Born. p. 129; Sharpe, Ibis 1889, p. 199; Büttik. N. L. M. 1893, p. 91.

A great number of specimens from the forests of Mount Kenepai and the western slope of the Liang Koeboeng-range, never found in the low country. — Iris dark brown, bill black, feet purplish gray. The female is only distinguished from the male by its smaller size.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

111. *Terpsiphone affinis.*

Tchitrea affinis Blyth, J. A. S. Beng. XV, p. 292.
Terpsiphone affinis Salvad. Ucc. Born. p. 137; Sharpe, Ibis 1889, p. 200; Everett, L. B. Born. p. 130.

Six specimens from Mount Liang Koeboeng (780 meters) and Nanga Raoen, also observed at Roema Manoeal, and on the Upper- and Lower Mahakkam. In the mountain-forests on the western slope of the Liang Koeboeng it was undoubtedly breeding, though I was not able to find its nest. — Iris dark brown, bill and eyelid blue, tip of bill black, inside of mouth yellowish green, tongue dark green, feet pale blue.

Hab. Sout-eastern Asia, from the Himalayas throughout the Sunda Islands as far as Java.

»Von diesem Vogel wurde das Nest gefunden, leider mit zerbrochenen Eiern. Das Nest war auf einem jungen, niedrigen Bäumchen gebaut, etwas über Mannshöhe. Es hatte die Grösse eines Finkennestes, war aus Moos gebaut und mit Fäden gefüttert" (von Berchtold).

112. *Philentoma pyrrhopterum.*

Muscicapa pyrrhoptera Temm. Pl. Col. 596, fig. 2 (♂) (1836).
Philentoma pyrrhopterum Salvad. Ucc. Born. p. 138; Sharpe, Ibis 1889, p. 200; Everett, L. B. Born. p. 130.

A great number of specimens of both sexes from Roema Manoeal, Mount Kenepai, Nanga Raoen, the Siniai Valley and the mountain-forests of the Liang Koeboeng; also from the Upper- and Lower Mahakkam. — Iris red, bill black, in younger specimens flesh-color, feet grayish blue.

It is a somewhat strange fact that amongst numerous males collected in the above mentioned localities there is not a single one in fully mature dress, all having wings and tail chestnut and breast and abdomen white with a tinge of fulvous. There are, however, specimens amongst them with some blue feathers in the wings and on the lower back and abdomen, and I should say, from this fact, that the fully blue dress of the adult male is only assumed in the dry season, which, in the Kapoeas basin, begins about May. On the other hand I am obliged to state that a specimen obtained on January 29th has just as much blue in the wing as others which were shot in April, and a male obtained on May 10th has no blue on the wings at all. It is rather incomprehensible that amongst the many males their would only immature specimens be obtained. Strange enough Mr. Oates (Faun. Brit. Ind. Birds, II, p. 43) does not mention the entirely blue dress of the adult male at all.

Hab. Malay Peninsula, Sumatra and Borneo.

113. *Philentoma velatum.*

Drymophila velata Temm. Pl. Col. 334 (♂) (1825).
Philentoma velatum Salvad. Ucc. Born. p. 139; Everett, L. B. Born. p. 130.

Twelve specimens from the forests of Mount Kenepai, Nanga Raoen and the western slope of the Liang Koeboeng, also two specimens from the Upper Mahakkam. A young female (N°. 1123), shot together with an adult male on April 25th, in the forest of the Liang Koeboeng, probably not many days after having left the nest, is quite different from the adult birds in color. The whole plumage, with the exception of wings and tail, is chestnut-brown, yielding to maroon on the upper surface, especially on the head, but much lighter than the throat in the adult male. Wings and tail, which have not yet attained their full size, are of the same color as in the adult birds, but the scapularies and all the upper wing-coverts are brown like the back. The change of color seems to be undergone by a complete moult, as amongst the wing-coverts and scapulary feathers there are numerous young feathers making their appearance which are entirely blue (see also Oates, Fauna Brit. Ind. Birds, II, p. 43). — Iris blood-red, in the young specimen dark brown, bill black, feet dark gray. The breeding season seems, according to the above mentioned young bird, to be in March and April.

Hab. From Tenasserim through the Malay Peninsula to Sumatra and Borneo, on which latter island it is widely distributed and an inhabitant of lower as well as mountainous countries. The Leyden Museum is in possession of specimens from Java and Timor. On the Natuna Islands this species seems to be represented by a somewhat different form, *Philentoma dubium* Hartert.

Artamidae.

114. *Artamus leucorhynchus.*

Lanius leucorhynchus L. Mant. Plant. p. 524 (1771).
Artamus leucorhynchus Salvad. Ucc. Born. p. 140; Everett, L. B. Born. p. 144; Sharpe, Ibis 1889, p. 433.

Three adult birds from Pontianak, two nestlings from Poelau, and a specimen from the Upper Mahakkam. The latter have the quills and tail-feathers slightly tipped with white, otherwise they do not differ in color from the adult. — Iris dark brown, bill bluish gray, tip black, feet dark gray.

Hab. From the Andamans through the Malaiasian region, the Moluccas and New Guinea to Australia.

Campephagidae.

115. *Pericrocotus xanthogaster.*

Lanius xanthogaster Raffl. Trans. Linn. Soc. XIII, p. 309 (1822).
Pericrocotus ardens Salvad. Ucc. Born. p. 143, pl. II.
Pericrocotus xanthogaster Sharpe, Ibis 1889, p. 192; Everett, L. B. Born. p. 125.

An adult male from Pontianak, collected by Mr. Moret. — Iris dark brown, bill and feet black.

Hab. Malay Peninsula, Sumatra and Borneo throughout.

116. *Lalage terat.*

Turdus terat Bodd. Tabl. Pl. Enl. pl. 17 (1783).
Lalage terat Salvad. Ucc. Born. p. 145; Sharpe, Ibis 1889, p. 194; Everett, L. B. Born. p. 126.

An adult male from Pontianak, collected by Mr. Moret. — Iris brown, bill and feet black.

Hab. Malay Peninsula, Nicobars, Nias, Sumatra, Java, Banka, the Philippines, throughout Borneo.

117. *Lalage culminata.*

Ceblepyris culminata Hay, Madr. Journ. XIII, p. 157 (1844).
Volvocivora Schierbrandi Salvad. Ucc. Born. p. 148.
Lalage culminata Sharpe, Ibis 1889, p. 194; Everett, L. B. Born. p. 126.

Two males and two females from Smitau, Roema Manoeal, Liang Koeboeng, and a male and a female from the Upper Mahakkam. — Iris dark brown in the females, blood-red in the males, bill grayish black.

Hab. Malay Peninsula, Sumatra and Borneo (throughout the island).

118. *Artamides sumatrensis.*

Ceblepyris sumatrensis S. Müll. Verh. p. 190.
Graucalus sumatrensis Salvad. Ucc. Born. p. 150.
Artamides sumatrensis Sharpe, Ibis 1889, p. 191; Everett, L. B. Born. p. 125.

Two adult males, collected by Mr. Moret near Pontianak. — Iris milky white, bill and feet black, soles yellow.

Hab. Malay Peninsula, Sumatra, Borneo, where it is spread over the whole island.

119. *Irena criniger.*

Irena cyanea Salvad. Ucc. Born. p. 151 (1874); id. Ann. Mus. Civ. Genova, 1879, p. 207.

Irena criniger Sharpe, Cat. B. Br. Mus. III, p. 267; id. id. VI, p. 176; id. Ibis 1889, p. 277; Everett, L. B. Born. p. 117.

A great number of specimens collected on Mounts Kenepai and Liang Koeboeng, at Poelau in the Sibau Valley, and on the Upper Mahakkam. — Iris carmine, bill and legs black.

Hab. Sumatra and Borneo, where it is spread over the whole island.

Dicruridae.

120. *Dissemurus platurus.*

Dicrurus platurus Vieill. N. D. IX, p. 588 (1817).

Dissemurus brachyphorus Salvad. Ucc. Born. p. 154; Sharpe, Ibis 1889, p. 188.

Dissemurus platurus Büttik. N. L. M. 1887, p. 50; Everett, L. B. Born p. 124.

Numerous specimens from Pontianak, Smitau, Nanga Raoen, Poetoes Sibau, Poelau and Long Bloe (Upper Mahakkam). — Iris reddish brown to blood-red, bill and feet black.

Hab. Malacca, Sumatra, Nias, Banka, Java, Borneo, where it is spread over the whole island.

I have looked over our large material from the above mentioned localities again and I am only strengthened in my opinion, expressed in the above mentioned paper on Sumatran birds, that the Bornean birds should not be separated under the name of *D. brachyphorus*.

Extract from Mr. von Berchtold's field-notes: »Ich habe sehr oft Gelegenheit gehabt zu beobachten, dass diese Vögel, namentlich vor der Abenddämmerung, sobald sie paarweise ihr Nachtquartier bezogen haben, die vorbeifliegenden Raubvögel unter heftigem Geschrei attaquiren und dieselben eine kurze Strecke verfolgen."

Laniidae.

121. *Hemipus obscurus.*

Muscicapa obscura Horsf. Trans. Linn. Soc. XIII, p. 146 (1822).

Myiolestes obscurus Salvad. Ucc. Born. p. 156.
Hemipus obscurus Sharpe, Cat. B. Br. Mus. III, p. 305; id. Ibis 1889, p. 189.

Two adult males and a female, all from Smitau, an adult male from Pontianak and three males and a female from the Upper Mahakkam. — Iris dark brown, bill and feet black.

Hab. Malacca [1], Sumatra, Banka and Billiton (specimina in Mus. Lugd.), Java and Borneo, where it is spread throughout the island.

122. *Hemipus picatus.*

Muscicapa picata Sykes, P. Z. S. 1832, p. 85.
Hemipus intermedius Salvad. Ann. Mus. Civ. Gen. XIV (1879), p. 209 (Uccelli di Sumatra); Büttik. N. L. M. 1887, p. 51.
Hemipus picatus Sharpe, Ibis 1889, p. 189; Everett, L. B. Born. p. 123; Oates, Faun. Br. Ind. Birds, I, p. 471; Sharpe, Ibis 1892, p. 434; id. id. 1893, p. 551; id. id. 1894, p. 543.
Hemipus capitalis Hose, Ibis 1893, p. 395.

An immature male and two females obtained on the western slope of Mount Liang Koeboeng, at an altitude of 870 meter. — Iris dark brown, bill black, feet leaden gray. Living in the undergrowth of the virgin forest.

Hab. From South India and Ceylon eastwards through Burma and Tenasserim to Siam and Cochin China, Sumatra and Borneo. On the latter island it has been discovered by Mr. Whitehead on Mount Kina Balu, and was afterwards also found on Mount Dulit and Mount Mulu by Mr. Ch. Hose, and on Mount Penrisen and Mount Poeh by Mr. A. H. Everett.

The immature male is still wearing the plumage of the young bird, which does not differ from that of the female, but here and there on the brown head and back can be seen some beginnings of the glossy black plumage of the adult male. The rump in the male and both females is

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1) According to Dr. Sharpe (l. c.) this species is found as far north as Tenasserim, but Mr. Oates, Fauna of Brit. India Birds, Vol. I, p. 473, believes that it does not range farther north than Malacca.

pure white with a few black cross-bars on the anterior part; the shorter upper tail-coverts are also white, while the longer are black like the three innermost pairs of tail-feathers. The three outer pairs of tail-feathers are black with white tip, which latter is largest on the outermost pair, where it has an extent of 3 cm. on the outer, and of about 2 cm. on the inner web. The basal third of the outer web is black. In one of the two females even the fourth pair are, though narrowly, tipped with white.

In a treatise on Sumatran birds (N. L. M. 1887, p. 52) I uttered some doubts as to the distinctness of *H. picatus*, *H. capitalis* and *H. intermedius,* and Dr. Sharpe (Ibis 1889, p. 190) believes that *H. picatus* and *H. capitalis* are identical. But in the same year, Mr. Oates (Faun. Brit. India Birds, I, p. 471) points out a constant distinguishing character, saying that the adult male of *H. picatus* has head and back glossy black, while in *H. capitalis* only the head and hind neck are black, strongly contrasting with the back, which is brown. As females and young birds of both species are alike, the difference is entirely based upon the color of the back in adult males. *Hemipus capitalis* is enumerated by Mr. Ch. Hose (Ibis 1893, p. 395) in his paper on the birds of Mount Dulit. But this is very probably a mistake, as the same bird is mentioned in a previous list (Ibis 1892, p. 434) as *H. picatus.* It is, on the contrary, very probable that *H. capitalis* does not exist in Borneo at all and that the only highland-form occurring on that island as well as in Sumatra belongs to *H. picatus.*

In my above mentioned paper on Sumatran birds I suggested that *H. intermedius* Salvad. might be identical with *H. picatus.* Count Salvadori (Uccelli di Sumatra, p. 209) says that *H. intermedius* agrees with *H. picatus* in the shining black color of the upper parts, while in the extent of the white tips to the tail-feathers it resembles *H. capitalis* from Nepal. But since there is, in fact, no difference in the extent of the white color on the tail between the mentioned species, this cannot be used as a distinguishing character for *H. intermedius*, which agrees in every respect with the adult males of *H. picatus* from Burma, Sumatra and Borneo, contained in the Leyden Museum. Only the size of the type of *H. intermedius* (6,5 cm.) is rather surpassing the average size of *H. picatus*, but a male of the latter species from Burma, recently received in exchange from the British Museum, is quite as large, so that the size cannot form a distinguishing characteristical.

123. *Tephrodornis gularis.*

Lanius gularis Raffl. Trans. Linn. Soc. XIII, p. 304 (1822).
Tephrodornis gularis Salvad. Ucc. Born. p. 156; Büttik. N. L. M. 1887, p. 52 (1); Sharpe, Ibis 1889, p. 188; Everett, L. B. Born. p. 121.

Two specimens (male and female) from Mount Kenepai. Iris greenish yellow, bill black, feet gray.

Hab. Malacca, Sumatra and Borneo, where it seems to occur throughout the island.

124. *Lanius tigrinus.*

Lanius tigrinus Drap. Dict. Class. Hist. Nat. XIII, p. 523 (1828); Everett, L. B. Born. p. 121.

An immature female from the southern foot of Mount Kenepai and four specimens from the Upper Mahakkam. — Iris black, bill bluish white, feet gray.

Hab. From Eastern Asia through Malacca to Nias, Sumatra and throughout Borneo.

Paridae.

125. *Dendrophila corallipes.*

Dendrophila corallipes Sharpe, Ibis 1888, p. 479; id. id. 1889, p. 420; Everett, L. B. Born. p. 120.

An adult specimen, collected by the Controller Mr. Westenenk at Sanggau. — Iris light yellow, eyelid, bill and feet coral-red.

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1) I have once more compared our Sumatran specimens with those from Borneo and feel convinced now that they all belong to the present species.

Dicaeidae.

126. *Prionochilus xanthopygius.*

Prionochilus xanthopygius Salvad. Atti R. Acad. Torino, III, p. 416 (1868); id. Ucc. Born. p. 162; Everett, L. B. Born. p. 140; Sharpe, Ibis 1889, p. 430; Büttik. in Weber, Zool. Ergebn. III, p. 302 (1894).

A great number of specimens from Roema Manoeal, Mount Kenepai, the valley of the Siniai, the Liang Koeboeng range and Nanga Raoen; also from the Upper Mahakkam. — Iris brown, bill black, lower mandible horny gray, feet gray.

Hab. Borneo.

127. *Prionochilus thoracicus.*

Pardalotus thoracicus Temm. Pl. Col. III. pl. 600, figs. 1 et 2 (1836).
Prionochilus thoracicus Strickl. P. Z. S. 1841, p. 29; Salvad. Ucc. Born. p. 163; Everett, L. B. Born. p. 140; Sharpe, Ibis 1889, p. 430; Büttik. in Weber, Zool. Ergebn. III, p. 302 (1894).

Eight specimens from Smitau and Roema Manoeal. — Iris, bill and feet black. — Two probably young, though full-grown specimens, which have been preserved in spirits, differ very much from both adult male and female, having the upper surface dark grayish olive-green, with hardly any indication of yellow on the centre of the crown, and the lower surface dark ashy gray, with yellowish white centre of breast and abdomen. Rump, upper- and under tail-coverts pale yellow, quills and tail-feathers black, the secondaries edged with green, under wing-coverts silky white, bill brown, angle of mouth and basal three thirds of lower mandible yellow. Having an adult male and female, also preserved in spirits, which are not altered at all in color, I may presume the same with regard to the two specimens which I have mentioned above as immature birds.

Hab. Malay Peninsula and Borneo.

128. *Prionochilus maculatus.*

Pardalotus maculatus Temm. Pl. Col. III, pl. 600, fig. 3 (1836).

Prionochilus maculatus Strickl. P. Z. S. 1841, p. 29; Salvad. Ucc. Born. p. 164; Sharpe, Ibis 1877, p. 17; Everett, L. B. Born. p. 140; Büttik. in Weber, Zool. Ergebn. III, p. 302 (1894).

Three specimens from Roema Manoeal, Nanga Raoen and Poelau, and eight specimens from the Upper Mahakkam. — Iris of the male reddish brown, of the female orange; bill black, lower mandible bluish gray, feet bluish gray.

Hab. Malay Peninsula, Sumatra and Borneo.

129. *Prionochilus ignicapillus.*

Dicaeum ignicapilla Eyton, P. Z. S. 1839, p. 105.

Prionochilus percussus W. Blasius, Verh. z. b. Ges. Wien, XXXIII, p. 54.

Prionochilus ignicapillus Everett, L. B. Born. p. 140; Büttik. in Weber, Zool. Ergebn. III, p. 302 (1894).

An adult male from Poelau. — Iris light brown, bill black, feet dark gray.

Hab. From Tenasserim down the Malay Peninsula to Sumatra and Borneo.

130. *Piprisoma Everetti.*

Prionochilus Everetti Sharpe, Ibis 1877, p. 16; id. P. Z. S. 1879, p. 345, pl. XXX, fig. 1; Everett, L. B. Born. p. 141; Sharpe, Ibis 1893, p. 553.

Piprisoma Everetti Büttik. in Weber, Zool. Ergebn. III, p. 303 (1894).

Adult male and female from Roema Manoeal, and four males from the Upper Mahakkam. — Iris yellow, brownish yellow or gray, bill and feet leaden gray. — The male is considerably larger than the female, the wing of the first measuring 6 cm., of the latter only 5,6; but in the color there is no difference whatever. From *P. obsoletum* (Müll. & Schl.), from Timor and Flores, the present species differs by wanting the white terminal spot on the inner web of the outermost tail-feathers.

Hab. The lowlands of Borneo: Labuan, Sarawak and the Kapoeas basin.

131. *Dicaeum nigrimentum.*

Dicaeum nigrimentum Salvad. Ucc. Born. p. 165; Everett, L. B. Born. p. 139; Sharpe, Ibis 1889, p. 429.

A great number of specimens from Pontianak, Sanggau, Smitau, Roema Manoeal, Mount Kenepai, Nanga Raoen, Poelau and the Upper Mahakkam. — Iris, bill and feet black.

Hab. Malacca and Borneo.

132. *Dicaeum trigonostigma.*

Certhia trigonostigma Scop. Del. Flor. et Faun. Insubr. II, p. 91 (1786).
Dicaeum trigonostigma Salvad. Ucc. Born. p. 166; Everett, L. B. Born. p. 139; Sharpe, Ibis 1889, p. 429.

Numerous specimens from Sanggau, Smitau, Roema Manoeal, Mount Kenepai, Nanga Raoen, the Liang Koeboeng range, Poelau and the Upper Mahakkam. — Iris brown, bill black, base of lower mandible gray, feet gray.

Hab. From Burmah through Tenasserim and the Malayan Peninsula to Sumatra, Nias, the Batu Islands, Java and Borneo, where it is fairly common in and round the native settlements and in the jungle of abandoned plantations.

133. *Dicaeum chrysorrhoeum* 1).

Dicaeum chrysorrhoeum Temm. Pl. Col. IV, pl. 478, fig. 1 (1829); Salvad. Ucc. Born. p. 168; Everett, L. B. Born. p. 139; Sharpe, Ibis 1889, p. 429.

Two specimens obtained at Sanggau (Westenenk) and at Smitau, also from the Upper Mahakkam. — Iris red, gray or dark orange, bill and feet black. The difference in the color of the iris seems to be individual.

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1) Mr. Everett, in his List of Birds of Borneo, doubts the occurrence of *Dicaeum flammeum* in Borneo as being not thoroughly stated by any good evidence, and for this reason omitted it in his list. Although not having obtained the species myself, I am much pleased to state that the collections in the Leyden Museum contain many specimens of this species, collected in South-Borneo by authorities as Schwaner and Semmelink.

Hab. From the Eastern Himalayas through the Malay Peninsula to Sumatra, Java and Borneo.

134. *Dicaeum monticolum.*

Dicaeum monticolum Sharpe, Ibis 1887, p. 452; Everett, L. B. Born. p. 139.
Dicaeum monticola Sharpe, Ibis 1889, p. 428; id. id. 1890, p. 287, pl. VIII, figs. 1 and 2; Hose, Ibis 1893, p. 400.

An adult male obtained on the Liang Koeboeng range. — Iris dark brown, bill black, feet dark gray.

Hab. Mountain-regions of Borneo: Kina Balu, mountains of Sarawak and Liang Koeboeng.

Nectariniidae.

135. *Aethopyga Temmincki.*

Nectarinia Temmincki S. Müll. Nat. Gesch., Land- en Volkenk. p. 173 (1843).
Aethopyga Temmincki Everett, L. B. Born. p. 135; Sharpe, Ibis 1889, p. 421 (first description of the female).

An adult male and two adult females from the western slope of the Liang Koeboeng range, and an adult female from Mount Kenepai. Here may also be remembered the adult male, observed on the summit of Mount Kenepai and mentioned in my general introduction (N. L. M. 1897, p. 13). This species is a mountain form, representing the lowland-form *A. siparaja* in the higher regions of Mounts Kenepai and Liang Koeboeng. The female of the present species, for the first time described by Sharpe (see above), is easily distinguished from that of *A. siparaja* by the orange-red outer edgings to the quills and tail-feathers, and by the shorter tail, measuring only 2,5 cm. instead of 3,3. The Nos 999 and 1000 from Liang Koeboeng are probably matched male and female, shot together on a high tree. — Iris dark brown, bill black, lower mandible paler, feet brown.

Hab. Sumatra and Borneo. On the latter island found on the Kina Balu and on the mountains of Sarawak, above an elevation of 2000 feet.

136. *Aethopyga siparaja.*

Certhia siparaja Raffl. Trans. Linn. Soc. XIII, p. 299 (1822).
Aethopyga eupogon Salvad. Ucc. Born. p. 173.
Aethopyga siparaja Everett, L. B. Born. p. 135; Sharpe, Ibis 1889, p. 422.

Numerous specimens of both sexes from Pontianak, Roema Manoeal, Nanga Raoen and Poelau; also from the Upper Mahakkam. — Iris brown, bill black, lower mandible in the female brown, feet brown.

Hab. Malacca and the Sunda Islands.

137. *Chalcostetha insignis.*

Nectarinia insignis Jard. Mon. Sun-birds, p. 274 (1842).
Chalcostetha insignis Salvad. Ucc. Born. p. 177; Everett, L. B. Born. p. 135; Sharpe, Ibis 1889, p. 422.

An adult male, collected by Moret at Pontianak.

Hab. From South China through the Malay Peninsula and the Philippines to the Sunda Islands and Celebes.

138. *Cinnyris Hasselti.*

Nectarinia Hasselti Temm. Pl. Col. 376, fig. 3 (1825).
Nectarophila Hasselti Salvad. Ucc. Born. p. 177.
Cinnyris Hasselti Everett, L. B. Born. p. 136; Sharpe, Ibis 1889, p. 423.

Two adult males from Roema Manoeal. — Iris brown, bill and feet black.

Hab. Malay Peninsula and Sunda Islands.

139. *Cinnyris pectoralis.*

Nectarinia pectoralis Horsf. Trans. Linn. Soc. XIII, p. 167 (1822).
Cyrtostomus pectoralis Salvad. Ucc. Born. p. 170.
Cinnyris pectoralis Everett, L. B. Born. p. 136; Sharpe, Ibis 1889, p. 423.

Adult male and female, obtained at Smitau. — Iris, bill and feet black.

Hab. Malay Peninsula, Sunda Islands and the Nicobars.

140. *Anthreptes malaccensis.*

Certhia malaccensis Scop. Del. Flor. et Faun. Insubr. II, p. 91 (1787).
Anthreptes malaccensis Salvad. Ucc. Born. p. 178; Everett, L. B. Born. p. 137; Sharpe, Ibis 1889, p. 424.

A great number of specimens from Pontianak, Smitau, Roema Manoeal, Mount Kenepai, Nanga Raoen and Poelau, also from the Upper Mahakkam. Common in plantations and brushwood. — Iris red, in young specimens brown, bill black, feet olive-brown, soles yellow; in young specimens the feet are entirely orange.

Hab. Malay Peninsula, Siam, Sumatra, Nias, Java to Flores, Southern Philippine Islands, Borneo.

141. *Anthreptes hypogrammica.*

Nectarinia hypogrammica S. Müll. Nat. Gesch., Land- en Volkenk. p. 173 (1843).
Hypogramma nuchalis Salvad. Ucc. Born. p. 172.
Anthreptes hypogrammica Everett, L. B. Born. p. 136.

Four specimens from Mount Kenepai and the Liang Koeboeng range, where it is found in the crowns of high trees; also from the Upper Mahakkam. — Iris dark brown, bill black, feet olive-green, soles yellow.

Hab. Malay Peninsula, Sumatra and Borneo.

142. *Anthreptes simplex.*

Nectarinia simplex S. Müll. Nat. Gesch., Land- en Volkenk. p. 173 (1843).
Arachnophila simplex Salvad. Ucc. Born. p. 172.
Anthreptes simplex Everett, L. B. Born. p. 136.

Numerous specimens from Roema Manoeal, Mount Kenepai, the Liang Koeboeng range, Poelau and the Upper Sibau River, also from the Upper Mahakkam. — Iris reddish brown, bill black, feet brown, soles yellow.

Hab. Nias, Sumatra and Borneo, where it is distributed over the whole island.

143. *Anthreptes rhodolaema.*

Anthreptes rhodolaema Shelley, Mon. Nect. p. 313, pl. 101, fig. 1 (1878); Sharpe, Ibis 1879, p. 260; Everett, L. B. Born. p. 137.

Four adult males and a female from Pontianak, Smitau and Roema Manoeal, and an adult male from the Upper Mahakkam. — Iris red, bill black, feet olive-brown, soles yellow. — This species is easily distinguished from *A. malaccensis* by the red instead of olive tinge of the sides of the head, the great extent of the red color on the wing-coverts, the absence of purplish blue on upper back and mantle, and by the green instead of yellow color of the lower surface. In the above-mentioned localities it is generally found together with *A. malaccensis*. Captain Shelley, who in his above-mentioned monograph was the first to separate it from *A. malaccensis*, mentions as habitat of the present species Malacca and Sumatra, but the Leyden Museum is in possession of a great number of specimens from Borneo, which island is for the first time mentioned as the habitat of this species by Dr. Sharpe (l. c.).

Hab. Malay Peninsula, Sumatra and Borneo.

144. *Anthreptes phoenicotis.*

Nectarinia phoenicotis Temm. Pl. Col. 108, fig. 1, 388, fig. 2 (1824).
Chalcoparia singalensis Salvad. Ucc. Born. p. 180.
Anthreptes phoenicotis Everett, L. B. Born. p. 137; Sharpe, Ibis 1889, p. 425.

Twelve specimens from Roema Manoeal, the Liang Koeboeng range, Nanga Raoen and Poelau, and seven from the Upper Mahakkam. — Iris reddish brown, bill black, feet olive-brown, soles yellow.

Hab. From Bhutan through the Malay Peninsula and the Sunda Islands.

145. *Arachnothera modesta.*

Anthreptes modesta Eyton, P. Z. S. 1839, p. 105.
Arachnothera modesta Salvad. Ucc. Born. p. 183; Büttik. N. L. M. 1887, p. 57; Everett, L. B. Born. p. 137.

Three specimens from Pontianak and Mount Kenepai. — Iris brown, bill brown, lower mandible horny, feet flesh-color.

Hab. Malay Peninsula, Sumatra (Mus. Lugd., see my above-quoted comparative note on *A. modesta* and *A. affinis*) and Borneo.

146. *Arachnothera Everetti.*

Arachnothera modesta Sharpe, Ibis 1889, p. 425.
Arachnoraphis Everetti Sharpe, Ibis 1893, p. 561; Whitehead, Ibis 1894, p. 316.

An adult female from the Liang Koeboeng range and an adult male from the Upper Mahakkam, collected by Dr. Nieuwenhuis in January 1899. — Iris brown, bill black, lower mandible horny, feet flesh-color.

Hab. Mountain regions of Borneo: Kina Balu (Whitehead), Mount Penrisen (A. H. Everett) and the two abovementioned localities.

This species stands between *A. modesta* and the Javanese *A. affinis*. With the first it agrees in the olive-green (not golden green) tinge on the upper surface, and with the latter in showing the dark shaft-streaks more distinctly and extending also over the abdomen, and in being larger than *A. modesta*. The single specimen obtained on the Liang Koeboeng agrees fairly well with a specimen from the Kina Balu in the Leyden Museum but is somewhat less strongly striped and somewhat smaller. It must be observed, however, that the size is not very constant in either of these species, and that the stronger shaft-streaks do not hold well in all the specimens of the present species, so that the validity of this species seems somewhat doubtful. According to Mr. Whitehead (l. c.) the specimens from the Kina Balu, enumerated by Sharpe in

Ibis 1889, p. 425, under the name of *A. modesta*, belong to the present species, which, on account of the ridged culmen, is a true *Arachnothera*. I may be allowed to remember, that the Sumatran specimens in the Leyden Museum, from the Highlands of Padang (Dr. Klaesi) and Deli (Dr. Hagen), belong to *A. modesta* and not to *A. affinis*, which latter species seems to be restricted to Java.

147. *Arachnothera longirostris.*

Certhia longirostra Lath. Ind. Orn. I, p. 299 (1790).
Arachnothera longirostris Salvad. Ucc. Born. p. 186; Everett, L. B. Born. p. 137; Sharpe, Ibis 1889, p. 426.

A great number of specimens from Pontianak, Mount Kenepai, Nanga Raoen, Liang Koeboeng range, Poelau and the Upper Mahakkam. — Iris brown, bill black, lower mandible bluish white, feet grayish blue.

Hab. From British India through the Malay Peninsula to the Sunda Islands and Celebes? [1]).

148. *Arachnothera chrysogenys.*

Arachnothera chrysogenys Temm. Pl. Col. 388, fig. 1 (1826); Salvad. Ucc. Born. p. 181; Everett, L. B. Born. p. 138; Sharpe, Ibis 1889, p. 426.

Six specimens from Roema Manoeal, Poetoes Sibau and Poelau, and a female from the Upper Mahakkam. — Iris dark brown, bill black, edge of upper mandible yellow on the basal half, feet flesh-color. The »Hisiet" is considered to be a sacred bird by the Mahau of the Upper Mahakkam.

Hab. Malay Peninsula and the Sunda Islands.

149. *Arachnoraphis robusta.*

Arachnothera robusta S. Müll. & Schleg. Verh. Nat. Gesch. p. 68,

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1) This species is said by Müller & Schlegel (Verhand. Aves, p. 69), and upon their authority by other ornithologists, to be found also in Celebes. This opinion is based upon a specimen in the Leyden Museum, labelled „Forsten, Celebes", but no other evidence being known as to its occurrence on that island, the provenance of the specimen in question must be considered as very doubtful.

pl. 11, fig. 1 (1846); Salvad. Ucc. Born. p. 184; Büttik. N. L. M. 1887, p. 56.
Arachnoraphis robusta Everett, L. B. Born. p. 138.

An adult male from the western slope of the Liang Koeboeng range. — Iris dark brown, bill black, feet dark grayish green, soles ochraceous.

Hab. Malay Peninsula, Sumatra (Dr. Klaesi), Java and Borneo.

150. *Arachnoraphis crassirostris.*

Arachnocestra crassirostris Reichenb. Handb. Scansoriae, p. 314, N° 747, pl. 592, fig. 4016 (1854).
Arachnothera crassirostris Salvad. Ucc. Born. p. 187.
Arachnoraphis crassirostris Everett, L. B. Born. p. 138.

Three specimens from Roema Manoeal and the Liang Koeboeng range, also from the Upper Mahakkam. — Iris dark brown, bill black, base of lower mandible brownish gray, feet grayish olive, soles ochraceous.

Hab. Malay Peninsula, Sumatra and Borneo.

151. *Arachnoraphis flavigaster.*

Anthreptes flavigaster Eyton, P. Z. S. 1839, p. 105.
Arachnothera Eytoni, Salvad. Ucc. Born. p. 182.
Arachnoraphis flavigastra Everett, L. B. Born. p. 138.

Two specimens from the Liang Koeboeng range. — Iris dark brown, bill black, lower mandible brown, feet ochraceous.

Hab. Malacca, Sumatra and Borneo.

Meliphagidae.

152. *Zosterops squamifrons.*

Zosterops squamifrons Sharpe, Ibis 1892, pp. 323 and 436; Whitehead, Ibis 1893, p. 281; Hose, Ibis 1893, p. 401; Sharpe, Ibis 1893, pp. 552 and 561.

Two males and a female, obtained on Mount Kenepai, at an altitude of 600 meters. — Iris grayish or yellowish white, bill black, feet grayish green. Male and female of this aberrant species of *Zosterops* are quite similar in color and size.

Hab. Mountain-forests of Borneo (Kina Balu, most of the mountains of Sarawak, and Mount Kenepai).

153. *Aegithina viridis.*

Iora viridis Bp. Consp. I, p. 397, ex Temm. MS. in Mus. Lugd.
Iora scapularis Salvad. Ucc. Born. p. 190; Sharpe, Ibis 1877, p. 14; id. P. Z. S. 1879, p. 339 (with description of the egg).
Aegithina viridis Tweedd. Ibis 1877, p. 304; id. P. Z. S. 1878, p. 619; Sharpe, Cat. B. Br. Mus. VI, p. 11; id. Ibis 1889, p. 271; Everett, L. B. Born. p. 116.

A great number of this lowland-bird collected in plantations and brush-wood at Smitau, Nanga Raoen and Poelau. — Iris white, bill horny blue, feet gray. A female nestling, obtained at Nanga Raoen, is quite similar in color to the adult female. Iris brown.

Hab. Sumatra, Palawan and Borneo.

154. *Aegithina viridissima.*

Iora viridissima Bp. Consp. I, p. 397 (1850); Salvad. Ucc. Born. p. 192.
Aegithina viridissima Tweedd. Ibis 1877, p. 304, pl. 5; Sharpe, Cat. B. Br. Mus. VI, p. 6; id. Ibis 1889, p. 271; Everett, L. B. Born. p. 116.

An adult male from the southern foot of Mount Kenepai and an adult female from Pontianak; two specimens from the Upper Mahakkam. — Iris in male and female brown, bill and feet bluish gray.

Hab. Malay Peninsula, Sumatra and the lowlands of Borneo.

155. *Chloropsis zosterops.*

Chloropsis zosterops Vigors, App. Mem. Life Raffl. p. 674 (1830); Sharpe, Cat. B. Br. Mus. VI, p. 24; id. Ibis 1889, p. 271; Everett, L. B. Born. p. 116.
Iora viridissima Salvad. Ucc. Born. p. 192.
Iora sp.? Salvad. Ucc. Born. p. 191.

A great number collected at Smitau, on the southern foot of Mt Kenepai, in the forests on Mt Kenepai, on the Liang Koeboeng mountains, at Nanga Raoen and near Poelau; also from the Upper Mahakkam. A regular forest-bird. — Iris brown, bill black, base of lower mandible in the female horny blue, feet grayish blue.

Hab. From Tenasserim down the Malay Peninsula to Sumatra and Borneo.

156. *Chloropsis cyanopogon.*

Phyllornis cyanopogon Temm. Pl. Col. 512, fig. 1 (1829); Salvad. Ucc. Born. p. 194.
Chloropsis cyanopogon Sharpe, Cat. B. Br. Mus. VI, p. 32; id. Ibis 1889, p. 272; Everett, L. B. Born. p. 116.

Ten specimens collected at Sanggau, Smitau, on Mt Kenepai from the foot up to an altitude of 800 meter, on the Liang Koeboeng and in the Sibau valley, also from the Upper Mahakkam. — Iris dark brown, bill black, lower mandible gray, feet gray.

Hab. From Tenasserim down the Malay Peninsula to Sumatra and Borneo, where it seems to be spread over the whole island.

157. *Chloropsis viridinucha.*

Phyllornis icterocephala (nec Less.) Salvad. Ucc. Born. p. 195 (1874).
Phyllornis viridinucha Sharpe, Ibis 1877, p. 15; Tweedd. Ibis 1877, p. 305; Sharpe, Ibis 1878, p. 414.
Chloropsis viridinucha Sharpe, Cat. B. Br. Mus. VI, p. 31; Everett, L. B. Born. p. 117; Hose, Ibis 1893, p. 392.

An adult male and female obtained on Mount Kenepai, and another male on Mount Liang Koeboeng; also from the Upper- and Lower Mahakkam. — Iris dark brown, bill black, feet grayish blue, soles ochre. — Contents of stomach: Insects and fruits.

Hab. Restricted to Borneo, where it represents *Ch. icterocephala* from Malacca and Sumatra.

Brachypodidae.

158. *Trachycomus ochrocephalus.*

Turdus ochrocephalus Gm. Syst. Nat. I, p. 821 (1788).
Trachycomus ochrocephalus Cab. Mus. Hein. I, p. 109 (1850); Salvad. Ucc. Born. p. 196; Sharpe, Cat. B. Br. Mus. VI, p. 93; id. Ibis 1889, p. 275; Everett, L. B. Born. p. 114.

An adult female from Smitau, on the Kapoeas River; also from the Upper- and Lower Mahakkam. — Iris dark brown, bill and feet black.

Hab. From Tenasserim down the Malay Peninsula to Sumatra, Java and Borneo, where the species is spread over the whole island.

159. *Laedorusa analis.*

Turdus analis Horsf. Trans. Linn. Soc. XIII, p. 147 (1822).
Pycnonotus gourdini Bp. Consp. I, p. 266; Salvad. Ucc. Born. p. 198.
Pycnonotus analis Sclater, P. Z. S. 1863, p. 216; Salvad. Ucc. Born. p. 197; Sharpe, Cat. B. Br. Mus. VI, p. 140; id. Ibis 1889, p. 275; Everett, L. B. Born. p. 114.
Laedorusa analis Büttik. N. L. M. 1895/6, p. 239.

Eight specimens from Pontianak, Smitau, Nanga Raoen and Poelau, all in the large plain of the Upper Kapoeas River, where the species is found in the jungle of abandoned plantations and low forest. A female was obtained on the Upper Mahakkam. — Iris dark brown, bill black, feet grayish black.

Hab. From Tenasserim throughout the Malay Peninsula, Sumatra, Billiton, Java, Lombock, Borneo and Labuan. In Borneo it is a rather common lowland-species, in the North as well as in the extreme South of the island.

160. *Laedorusa plumosa.*

Pycnonotus plumosus Blyth, J. A. S. Beng. XIV, p. 567 (1845); Salvad. Ucc. Born. p. 198; Sharpe, Cat. B. Br. Mus. VI, p. 152; Everett, L. B. Born. p. 114.
Laedorusa plumosa Büttik. N. L. M. 1895/6, p. 240.

An adult female from Poelau; another female, with nest and eggs, from the Upper Sibau River. — Iris fire-red, bill black, feet flesh-color. — The nest is placed in shrubs about three or four feet above the ground and consists of a nice and rather deep cup of rootlets, grass-stems and broad leaves; its size is about that of a Finch's nest.

Hab. Tenasserim and Malay Peninsula, Nias, Sumatra and Borneo.

161. *Laedorusa simplex.*

Pycnonotus simplex Less. Rev. Zool. 1839, p. 167; Sharpe, Cat. B. Br. Mus. VI, p. 153; id. Ibis 1889, p. 276; Everett, L. B. Born. p. 115.
Laedorusa simplex Büttik. N. L. M. 1895/6, p. 240.

A great series collected at Pontianak, Smitau, Roema Manoeal, Mounts Kenepai and Liang Koeboeng, in the Sibau valley, and at Long Bloe, Upper Mahakkam. — Iris red, bill black, feet pale brown. — This species is very easily mistaken for *Iole olivacea* from which it can hardly be distinguished in color; but it is of a considerably smaller size, the bill is much smaller and less stretched, and the iris is red instead of white.

Hab. From Tenasserim down the Malay Peninsula, Nias, Sumatra, Java and Borneo, where it is distributed over the whole island.

162. *Laedorusa pusilla.*

Pycnonotus simplex (nec Less.) Bp. Consp. I, p. 263 (ex Kuhl M. S. in Mus. Lugd.).
Pycnonotus pusillus (nec Blyth) Salvad. Ucc. Born. p. 200 (1874); Sharpe, Cat. B. Br. M. VI, p. 155.
Pycnonotus Salvadorii Sharpe, Cat. B. Br. Mus. VI, p. 401; Everett, L. B. Born. p. 115; Hose, Ibis 1893, p. 391; Sharpe, Ibis 1893, pp. 547 and 551.
Laedorusa pusilla Büttik. N. L. M. 1895/6, p. 241.

A great number of specimens from Mounts Kenepai and Liang Koeboeng, from the Sibau River and the Upper

Mahakkam, found in the undergrowth of high forest. — Iris red (in an immature specimen brown), eyelid, angle of the mouth and nasal groove orange-yellow, bill black, feet fleshy brown, soles ochre. — This smallest of all the species of this genus is easily recognized by the orange-yellow eyelid, the sulphur-yellow under wing-coverts, ashy white throat (never tinged with brown or olive), the more slender and shorter bill and the small size.

Hab. From Tenasserim down the Malay Peninsula to Sumatra and Borneo.

163. *Pinarocichla euptilosa.*

Brachypus euptilosus Jard. & Selby, Ill. Orn. IV, pl. III (1825?); Salvad. Ucc. Born. p. 219.
Criniger Suzanii (Müll.) Salvad. Ucc. Born. p. 207.
Criniger tristis Brügg. Abh. Nat. Ver. Brem. V, p. 459 (1877).
Pinarocichla euptilosa Sharpe, Cat. B. Br. Mus. VI, p. 62; Everett, L. B. Born. p. 112; Büttik. N. L. M. 1895/6, p. 246.

Five specimens, collected in the forests on the western slope of Mount Liang Koeboeng, 700—800 m. above the sea, and eight specimens from the Upper Mahakkam. — Iris red, bill black, feet dark grayish brown.

Hab. Malay Peninsula, Sumatra and Borneo.

164. *Mesolophus montis.*

Rubigula montis Sharpe, P. Z. S. 1879, p. 247; id. Ibis 1889, p. 276 Everett, L. B. Born. p. 115; Sharpe, Ibis 1892, p. 433; Hose, Ibis 1893, p. 392; Sharpe, Ibis 1894, p. 543.
Otocompsa montis Sharpe, Cat. B. Br. Mus. VI, p. 162.
Mesolophus montis Büttik. N. L. M. 1895/6, p. 248.

A single specimen, shot on the top-plateau of the Liang Koeboeng (1300 m. above the sea), in low forest. A very lively and noisy bird, constantly moving up and down its long black crest when in excitement. — Iris brown, bill and feet black. — This species is decidedly a mountain-bird.

Hab. Borneo: Kina Balu, Mountains of Sarawak (M^{t}. Mulu and M^{t}. Dulit), and Liang Koeboeng.

This species is the Bornean representative of *M. flaviventris* from the Continent, from which species it differs by its smaller size and the want of black on chin and throat.

165. *Ixidia cyaniventris.*

Pycnonotus cyaniventris Blyth, J. A. S. Beng. XI, p. 792 (1842).
Ixidia cyaniventris Bp. Consp. I, p. 260; Büttik. N. L. M. 1895/6, p. 249.
Brachypus poliopsis Bp. Consp. I, p. 264 (ex. Müll. MS. in Mus. Lugd.).
Ixidia paroticalis Sharpe, Ibis 1878, p. 418; id. id. 1879, p. 256.
Rubigula cyaniventris Sharpe, Cat. B. Br. Mus. VI, p. 169.
Rubigula paroticalis Sharpe, Cat. B. Br. Mus. VI, p. 170; Everett, L. B. Born. p. 115; Hose, Ibis 1893, p. 391; Sharpe, Ibis 1893, pp. 547 and 551; id. Ibis 1894, p. 543.

Adult male and female from Mount Liang Koeboeng, where the species is found in the undergrowth of the high forest; also from Long Bloe. — Iris dark brown or gray, bill black, feet pale blue, soles ochre. — The above-mentioned two birds are similar in every respect to four specimens of *R. cyaniventris* from Sumatra and one from Malacca in the Leyden Museum, so that I am absolutely unable to find distinguishing characters. Those mentioned by Sharpe in his above-quoted Catalogue do not hold at all in the specimens which I have before me. The larger size of the Bornean specimens is mentioned by Sharpe as the strongest argument for a specifical separation, but the following measurements will show that this argument does not hold with the specimens in the Leyden Museum.

	Wing.	*Tail.*	*Tarsus.*	*Culmen.*
Borneo (*R. paroticalis*)	2,7—2,8 inches;	2,0 ;	0,6 ;	0,55.
Sumatra (*R. cyaniventris*)	2,8—2,9 » ;	2,2—2,5;	0,55—0,65;	0,6 .
Malacca (» »)	3,05 ;	2,4 ;	0,6 ;	0,6 .

Hab. Tenasserim, Malay Peninsula, Sumatra and Borneo, where it was hitherto only recorded from Sarawak.

166. *Ixidia Webberi.*

Ixidia squamata (nec Temm.) Salvad. Ucc. Born. p. 200; Sharpe, Ibis 1878, p. 419.
Ixidia Webberi Hume, Str. Feath. VIII, pp. 40 and 63 (1879); Büttik. N. L. M. 1895/6, p. 250.
Rubigula Webberi Sharpe, Cat. B. Br. Mus. VI, p. 171; Everett, L. B. Born. p. 115.

Four specimens from Mounts Kenepai and Liang Koeboeng, where it was found in high forest. — Iris red, bill and feet black.

Hab. Malay Peninsula, Sumatra and Borneo (Sarawak and Central Borneo).

167. *Brachypodius melanocephalus.*

Lanius melanocephalus Gm. Syst. Nat. I, p. 309 (1788).
Brachypodius melanocephalus Blyth, J. A. S. Beng. XIV, p. 576; Salvad. Ucc. Born. p. 201; Büttik. N. L. M. 1895/96, p. 251.
Micropus melanocephalus Sharpe, Cat. B. Br. Mus. VI, p. 65; id. Ibis 1889, p. 274; Everett, L. B. Born. p. 112.
Microtarsus melanocephalus Sharpe, Ibis 1894, p. 422.

Seven specimens from Mount Kenepai, the Siniai Valley, Nanga Raoen and the Sibau River, and ten specimens from the Upper Mahakkam. — A lowland-species, living in low jungle and in the undergrowth of high forest. — Iris grayish blue, bill black, feet grayish black.

There is, amongst my specimens, considerable difference in the metallic color of the head, which is steel green in some specimens and glossy purplish blue in others. The two specimens with the glossy green heads are a little larger and paler green than the others. These differences seem to be independant from sex and locality. A young female has the head green like the rest of the upper surface.

Hab. From Tenasserim down the Malay Peninsula to Sumatra, Java, Borneo and Labuan. In Borneo it is spread over the whole island.

168. *Microtarsus melanoleucus.*

Microtarsus melanoleucus Eyt. P. Z. S. 1839, p. 102; Salvad. Ucc. Born. p. 202; Büttik. N. L. M. 1895/6, p. 252.

Micropus melanoleucus Sharpe, Cat. B. Br. Mus. VI, p. 69; id. Ibis 1889, p. 274; Everett, L. B. Born. p. 112.

An adult female from the southern foot of Mount Kenepai and an adult male from Nanga Raoen, both shot in brushwood, and two specimens from the Upper Mahakkam. — Iris, bill and feet black. The adult female has the lower surface less dark brown than the male. An immature specimen in the Leyden Museum, from Sumatra, has the upper surface earthy brown, the feathers being broadly edged with olive-brown, while the lower surface is olive-gray. The white patch on the wing is only indicated by a few white feathers.

Hab. Malay Peninsula, Sumatra (Müller, Horner) and Borneo, where it seems to be spread over the whole island. One of the specimens in the Leyden Museum was collected at Koetei on the east-coast and presented by Dr. Vorderman.

169. *Hemixus malaccensis.*

Hypsipetes malaccensis Blyth, J. A. S. Beng. XIV, p. 574 (1845); Salvad. Ucc. Born. p. 202; id. Ann. Mus. Civ. Stor. Nat. Genova, XIV, p. 221 (1879); Sharpe, Ibis 1879, p. 256.

Trichophorus striolatus (ex Müll. M. S.) Bp. Consp. I, p. 262.

Hemixus malaccensis Sharpe, Cat. B. Br. Mus. VI, p. 52; Büttik. N. L. M. 1887, p. 63; Everett, L. B. Born. p. 111; Sharpe, Ibis 1889, p. 274; id. id. 1890, p. 277.

Hemixus sumatranus Ramsay, Ann. Mag. Nat. Hist. 1882, p. 431; Nicholson, Ibis 1883, p. 246; Salvad. Ann. Mus. Civ. Stor. Nat. Genova, XXV, p. 525 (1887/88).

Hemixus striolatus (part.) Salvad. op. cit. XXXII, p. 61 (1892).

A great series collected on Mount Kenepai and Mount Liang Koeboeng. Found in the low bamboo jungle as well as in the high forest. — Iris brown, bill black, base of lower mandible horny white, feet grayish brown.

Hab. Malay Peninsula, Sumatra, Central, Western and Northern Borneo. — Ramsay, and after him Nicholson and Salvadori (l. c.) have separated the Sumatran specimens from those from Malacca and Borneo under the name of *H. sumatranus*, and later on (l. c.) Salvadori identified this species with *H. striolatus* (Bp.), the types of which are in the Leyden Museum. Both Ramsay and Salvadori stated that their specimens from Western Sumatra differ from the Malaccan and Bornean birds in the following essential points: Upper surface olive-brown instead of olive-green, and the white-striped throat, chest and upper breast olive-green like in *H. virescens* instead of ashy olive. I regret to say that, after having looked over our material again and compared it with my Bornean specimens, I am unable to alter my former opinion (N. L. M. 1887, p. 63) as to the specimens from Sumatra in the Leyden Museum. Our types of *Trichophorus striolatus* as well as the specimens collected by Dr. Klaesi in the Highlands of Padang have throat, chest and upper breast ashy gray with an olive tinge, while, according to Ramsay and Salvadori, they ought to be olive-green. As to the color of the upper surface, I must say that in our stuffed typical specimens it yields somewhat to olive-brown, but this very slight difference is probably due to their having been exposed to the light for more than fifty years in our galleries. Dr. Klaesi's birds are olive-green above like those I have obtained in Borneo.

Strange enough Nicholson, who described the birds collected in Sumatra by Mr. H. O. Forbes (Ibis 1883, p. 246), says that the Sumatran birds have throat and breast streaked with white as in *H. malaccensis*, but that the edgings of the feathers are olive-brown instead of greenish, and that the head is brown, characters which neither agree with those given by Ramsay and Salvadori, nor with *H. malaccensis* which has a green head and ashy gray edgings to the breast-feathers.

The birds described by Ramsay and Salvadori are collected on Mount Singalang at a height of about 1600 m., and near the Lake Toba about 1500 m. above the sea. Having never seen one of those green-breasted specimens from Sumatra, I cannot tell much about their identity with *H. malaccensis*, but all our Sumatran specimens in the Leyden Museum, with the inclusion of the types of *Tri-*

chophorus striolatus, certainly belong to this latter species, as they cannot be distinguished from Malaccan and Bornean specimens.

170. *Hemixus connectens.*

Hemixus connectens Sharpe, Ibis 1887, p. 446; id. id. 1889, p. 273; id. id. 1892, p. 433; Everett, L. B. Born. p. 111.

Six specimens obtained on the western slope of Mount Liang Koeboeng, at an altitude of 800 m. above the sea. It inhabits the undergrowth of the high forest. — Iris grayish brown, bill black, feet gray.

Hab. The mountainous regions of Borneo. Whitehead discovered it on the Kina Balu, where it lives at an elevation from 1000 to 2600 m.; Mr. Hose found it on Mount Dulit and other Sarawak Mountains, about 1000 m. above the sea.

171. *Trichophoropsis typus.*

Trichophoropsis typus Bp. Comptes Rendus, 1854, p. 59; Salvad. Ucc. Born. p. 203; Sharpe, Cat. B. Br. Mus. VI, p. 88; Everett, L. B. Born. p. 113.

Criniger Bemmeleni Finsch, J. f. O. 1867, p. 29.

A single specimen (♂) obtained at the southern foot of Mount Kenepai. — Iris brown, bill horny gray, feet gray.

Hab. Sarawak and the central region of Borneo with inclusion of Moeara Teweh on the Upper Barito River.

172. *Tricholestes criniger.*

Brachypodius? criniger Blyth, J. A. S. Beng. XIV, p. 577 (1845).

Tricholestes minutus Salvad. Ucc. Born. p. 205, pl. V, fig. 1; Sharpe, Ibis 1877, p. 14; id. Ibis 1879, p. 257.

Tricholestes criniger Tweedd. Ibis 1877, p. 306; Sharpe, Cat. B. Br. Mus. VI, p. 89; id. Ibis 1889, p. 275; Everett, L. B. Born. p. 114.

Seven specimens from Mounts Kenepai and Liang Koeboeng; also from Long Bloe, Upper Mahakkam. Exclusively a forest-bird. — Iris dark brown, bill horny gray, feet yellowish flesh-color.

Hab. Malay Peninsula, Sumatra, Java and Borneo. On this latter island it was hitherto recorded from the North-east, the North and the North-west.

173. *Criniger gutturalis.*

Trichophorus gutturalis Bp. Consp. I, p. 262 [ex. Müll. M. S. in Mus. Lugd.] (1850).

Criniger gutturalis Sclat. P. Z. S. 1863, p. 216; Finsch, Journ. f. Orn. 1867, p. 15 (partim); Salvad. Ucc. Born. p. 206 (partim); Sharpe, Cat. B. Br. Mus. VI, p. 80 (partim); Everett, L. B. Born. p. 113.

A great series of specimens from Mts. Kenepai and Liang Koeboeng, and from the Upper Mahakkam, where it is found in low jungle as well as in high forest. — Iris reddish brown, bill horny blue, feet pale flesh-color.

Hab. From Tenasserim throughout the Malay Peninsula, Malacca, Sumatra and Borneo.

Wardlaw Ramsay (Ann. Mag. Nat. Hist. 1882, p. 431) described 11 Sumatran birds, collected by Karl Bock, as belonging to a new species, which he called *C. sumatranus*, and which would represent *C. gutturalis* in Sumatra. The material in the Leyden Museum evidently shows that *C. sumatranus* is a valid species, distinguished from *C. gutturalis* by an olive-brown instead of reddish brown crown and a somewhat longer occipital crest, by more richly developed and pure white feathers on chin and throat, and by having the under tail-coverts darker reddish ochraceous. To *C. sumatranus* belong also the specimens collected by Dr. Klaesi in the Highlands of Padang and wrongly (see also Salvadori, Ucc. di Sumatra, in Ann. Mus. Gen. 1892, p. 61) mentioned by me as *C. gutturalis* in N. L. M. 1887, p. 64, though their under tail-coverts do not differ in color from those in our series of *C. gutturalis* from Borneo.

On the other hand I learn from the specimens in the Leyden Museum, that *C. sumatranus* does not represent *C. gutturalis*, but is found together with this latter species in Sumatra. Besides the typical specimens from

Borneo our collections contain two specimens of the true *C. gutturalis* from Sumatra, both collected by S. Müller.

As to *C. sumatranus*, our Museum is in possession of an adult male, collected by S. Müller in Sumatra and strange enough, of another, also of an early date, said to come from Borneo. This latter fact is the more strange, as from Borneo was already known a second species of *Criniger*, *C. ruficrissus*, which would take a similar position in Borneo as *C. sumatranus* in Sumatra. It must be left to later investigations to make out whether *C. sumatranus* is really an inhabitant of Borneo as indicated by that single specimen in the Leyden Museum.

Finsch (l. c.), in describing his *C. gutturalis* after the specimens in the Leyden Museum, used as objects the male of *C. sumatranus* and a female of *C. gutturalis*, as we learn from his remarks about the female.

174. *Criniger ruficrissus.*

Criniger gutturalis Salvad. Ucc. Born. p. 207 (partim)[1].
Criniger ruficrissus Sharpe, P. Z. S. 1879, p. 248; id. Cat. B. Br. Mus. VI, p. 81; id. Ibis 1889, p. 274; Everett, L. B. Born. p. 113.

Six specimens from Mount Liang Koeboeng, where they are found in high forest. — Iris blood red, bill horny blue, feet flesh-color.

This species is closely allied to *C. gutturalis*, from which it differs more strikingly than *C. sumatranus* especially in the following points: like in *C. sumatranus* the crown is olive-brown instead of rusty brown, the occipital crest more developed, the white feathers on chin and throat longer and purer white and the under tail-coverts darker brown. Moreover *C. ruficrissus* is somewhat larger and of a duller color above and below than both its above-mentioned congeners, being less lively olive-green but rather grayish olive, the tail-feathers as well as the upper and lower tail-coverts are much browner than in the other two species.

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[1] The specimen (N° 653), ranged by Salvadori with some doubts to *C. gutturalis*, though it is larger and darker above and below, undoubtedly belongs to the present species.

Hab. Restricted to Borneo, where it is not so generally distributed as *C. gutturalis*, but rather an inhabitant of the hilly regions than of the plains and coast regions. It is a rather strange fact that two so closely allied species as *C. gutturalis* and *C. ruficrissus* were both found together at the same time in the forests of the Liang Koeboeng.

175. *Criniger Diardi.*

Trichophorus Diardi Temm. MS. Mus. Lugd.
Criniger Diardi Finsch, J. f. O. 1867, p. 18; Salvad. Ucc. Born. p. 208; Everett, L. B. Born. p. 113; Hose, Ibis 1893, p. 390.

A great number of specimens collected at the foot and on the slopes of Mount Kenepai, on the western slope of the Liang Koeboeng, at Nanga Raoen and in the Sibau valley; also from Long Bloe on the Upper Mahakkam. It is an inhabitant of low and high forest. — Iris brown, bill horny gray, feet yellow.

Males and females do not differ in size and color. Birds in transitional stage of plumage have the secondaries strongly margined with rufous. A nearly fledged nestling, obtained on Mount Liang Koeboeng, differs remarkably in having the upper surface, especially the secondaries and wing-coverts, russet brown instead of olive-green, the crown olive-brown instead of ashy gray, the throat yellow instead of pure white, the chest olive-green instead of ashy gray, and the rest of the lower surface pale sulphur-yellow. Although the plumage is quite downy, the long nuchal hairs are already strongly developed.

Hab. Restricted to Borneo, where it seems to be distributed over the whole island.

176. *Criniger Finschii.*

Criniger Finschii Salvad. Atti R. Acad. Torino VI, p. 128 (1871); id. Ucc. Born. p. 209; Sharpe, Cat. B. Br. Mus. VI, p. 84, pl. 6, fig. 1; Everett, L. B. Born. p. 113.

Seven specimens collected in the forests of Mount Liang Koeboeng and sixteen on the Upper Mahakkam. — Iris light brown, bill horny gray, feet brownish flesh-color. In some specimens the crown is conspicuously tinged with brown, but this variation seems to be independant from the sex. The male is constantly somewhat larger than the female.

Hab. Malayan Peninsula and Borneo, where it seems to be widely distributed.

177. *Iole olivacea.*

Iole olivacea Blyth, J. A. S. Beng. XIII, p. 386; Salvad. Ucc. Born. p. 210; Everett, L. B. Born. p. 111.

A large series from Mounts Kenepai and Liang Koeboeng, where it was found in high forest. Also from the Upper Mahakkam. — Iris white, bill horn-color, feet greenish yellow.

The immature bird has the upper surface, especially the wing, strongly tinged with ferruginous.

Hab. Malay Peninsula, Sumatra, Java and Borneo, where it seems to be spread over the whole island.

Timeliidae.

178. *Eupetes macrocercus.*

Eupetes macrocercus Temm. Pl. Col. II. pl. 516 (1836); Sharpe, Ibis 1890, p. 367; Hose, Ibis 1893, p. 388; Sharpe, Ibis 1894, pp. 421 and 542.

Two specimens (adult male and female) were shot near my station on the western slope of the Liang Koeboeng, at an altitude of 750 m., and an adult male on the Bruny River (Upper Mahakkam). — Iris dark brown, bill horny brown, naked skin on the neck blue, feet dark grayish blue.

It is by no means easy to see these birds, as they are running along the ground in high forest hidden by undergrowth and protected by their brown color which is much that of the dead leaves amongst which they are scratching in search for insects and their larvae. As soon as such a bird finds itself observed, it will rest motionless on the same spot until it believes the danger to be over.

This species is known from Malacca, Sumatra and Borneo. From this latter island it was unknown until a few years ago, when it was found by Mr. Everett on Mt Penrisen, and by Mr. Hose on Mt Dulit, Mt Kalulong and Mt Mulu.

179. *Pomatorhinus borneensis.*

Pomatorhinus borneensis Cat. Mus. Hein. I, p. 84 (1850); Salvad. Ucc. Born. p. 210; Everett, L. B. Born. p. 104; Sharpe, Ibis 1889, p. 411.

A great number of specimens from Mounts Kenepai and Liang Koeboeng. Also from the Upper Mahakkam. — Iris pale yellow, bill horny white, culmen black on the basal three thirds, feet grayish blue, toes underneath ochre.

This exclusively Bornean species seems to be spread over the whole island, as it was already recorded from the South-east, the North-west and the North.

180. *Stachyris maculata.*

Timalia maculata Temm. Pl. Col. 593, f. 1 (1836); Salvad. Ucc. Born. p. 211.

Stachyris maculata Sharpe, Cat. B. Br. Mus. VII, p. 538; Everett, L. B. Born. p. 105; Sharpe, Ibis 1889, p. 414.

Numerous specimens from the Mounts Kenepai and Liang Koeboeng, and from the Sibau- and Siniai valleys, and four specimens from Long Bloe (Upper Mahakkam). A female specimen from the Siniai valley (at the eastern foot of the Liang Koeboeng) has hardly any black stripes on breast and belly, while a male from the same locality has the black shaft-stripes very strongly developed. — Iris from terra-cotta-yellow to yellowish white; eyelid and skin on face and throat sky-blue to purplish blue, and a stripe on both sides of the throat cobalt-blue; bill black, lower mandible pale blue, feet pale blue.

This rather quiet bird frequents low jungle and the undergrowth of high forest, where it feeds upon insects.

This species is known from Malacca, Sumatra and Borneo, where it seems to be spread over the whole island, having been recorded from Banjermasin (Mottley) and Moeara Teweh on the Barito River, Sandakan Bay (Guillemard) and N. W. Borneo.

181. *Stachyris nigricollis.*

Timalia nigricollis Temm. Pl. Col. II, pl. 594, f. 2 (1836); Salvad. Ucc. Born. p. 212.
Stachyris nigricollis Sharpe, Cat. B. Br. Mus. VII, p. 535; Everett, L. B. Born. p. 104.

An immature male and an adult female with a nestling, all from Nanga Raoen, and ten specimens from the Bruny River (Upper Mahakkam). The younger bird differs from the adult in having the crown strongly tinged with rusty brown, a shade of which color is also to be seen on the abdomen and especially on the thighs; the white beard-spot is fully developed, while the white edging of the black gular spot is but faintly indicated. In the adult bird the white edging is formed by the lateral and hindmost black feathers of the throat having a rather broad and pure white subterminal band. The young bird seems to have no black on the throat, the extent of black in our immature bird being less than in the adult, and some of the lateral feathers being gray with a tendency of getting black, and showing a small central spot of white. — Iris in the adult bird red, in the immature one brown, bill in the adult bird black, lower mandible pale blue, while the latter is yellow in the younger bird, feet grayish blue.

The nestling has the entire head, neck and lower surface uniform sooty brown; back, wing and upper tail-coverts chestnut. The white spot at the angle of the bill is fully developed, as also the white spot behind the eye.

Hab. Malacca, Sumatra and Borneo. On the latter island it seems to be generally distributed, as it is recorded from the South, the North-west, the North and the North-east.

182. *Stachyris poliocephala.*

Timalia poliocephala Temm. Pl. Col. II, pl. 593, f. 2 (1836); Salvad. Ucc. Born. p. 212.
Stachyris poliocephala Sharpe, Cat. B. Br. Mus. VII, p. 534; Everett, L. B. Born. p. 104; Sharpe, Ibis 1889, p. 414.

Two females from Mount Kenepai, two males from the Liang Koeboeng mountains and four males from the Upper Mahakkam. Living in brushwood and undergrowth of high forest. — Iris yellow, bill black, lower mandible horny blue, feet dirty green.

Hab. Malay Peninsula, Sumatra and Borneo (Kina Balu and Mount Kalulong).

183. *Stachyris leucotis.*

Timalia leucotis Strickl. Contr. Orn. 1848, p. 63, pl. 12.
Stachyris leucotis Sharpe, Ibis 1878, p. 418; id. Cat. B. Br. Mus. VII, p. 537; Everett, L. B. Born. p. 104.

Four adult specimens from Mounts Kenepai and Liang Koeboeng. Males and females are alike in color. — Iris black, bill black, base of lower mandible blue, feet brown.

Hab. Malacca and Borneo, where it was, hitherto, only obtained in Sarawak.

184. *Stachyris larvata.*

Timalia larvata Bp. Consp. I, p. 217 (1850); Sharpe, Cat. B. Br. Mus. VII, p. 534.
Stachyris borneensis Sharpe, Ibis 1887, p. 449; id. Ibis 1889, p. 413.

A series of ten specimens from Mt Kenepai and the Liang Koeboeng range, which are identical with one of Mr. Whitehead's specimens of *St. borneensis* from the Kina Balu. Comparing them with the types of *St. larvata* Bp. from Sumatra, I find that they cannot be separated from this latter species. It may be said that amongst our Bornean series there is some difference in the shade of the rufous-brown on the lower surface, some specimens being darker, other paler brown, but this difference appears to be quite individual, having nothing to deal with either sex, season or locality. Especially the darker specimens agree extremely well with the types from Sumatra. — Iris brick-red, in some specimens pale yellow, bill black, angle of mouth yellow in a young specimen, feet pale green, soles yellow. — Lives in brushwood and the undergrowth of high forest.

Hab. This species is known from Sumatra and Borneo, on which latter island it has hitherto been found in the North (Kina Balu) and in the mountainous parts of Sarawak.

185. *Staphidia Everetti.*

Staphidia everetti Sharpe, Ibis 1887, p. 447; id. id. 1889, p. 281; Everett, L. B. Born. p. 107.

Ten specimens collected in the forests of Mount Kenepai, at an avarage altitude of 500—600 m., while none were obtained in the plain at the foot of the mountain. All the specimens, probably freshly moulted, differ somewhat from the original description and also from one of Mr. Whitehead's specimens from Kina Balu which is at my disposal, in having the upper tail-coverts olive-gray like the back, instead of brown, while the central tail-feathers are broader and very dark brown or nearly black instead of earthy brown as shown by our Kina Balu specimen. — Iris brown, bill horny gray, feet flesh-color.

Hab. Restricted to Borneo, where it was discovered by Mr. Whitehead on the Kina Balu and afterwards found by other explorers on the mountains of Sarawak.

186. *Herpornis brunnescens.*

Herpornis brunnescens Sharpe, Ibis 1876, p. 41; id. id. 1879, p. 257; id. Cat. B. Br. Mus. VII, p. 637; Everett, L. B. Born. p. 107; Sharpe, Ibis 1889, p. 281; id. id. 1890, pp. 278, 290, 291; id. id. 1893, p. 550; id. id. 1894, p. 542.

Eight specimens from Mount Kenepai and the western slope of Mount Liang Koeboeng. Found in the undergrowth of primeval forest. — Iris dark brown, bill flesh-color, feet pale flesh-color.

Hab. Northern, Western and Central Borneo.

187. *Cyanoderma bicolor.*

Timalia bicolor Blyth, Ibis 1865, p. 46; Brüggem. Abh. Brem. V, p. 460.
Cyanoderma erythropterum Salvad. Ucc. Born. p. 213.
Mixornis bicolor Sharpe, Cat. B. Br. Mus. VII, p. 581.
Cyanoderma bicolor Sharpe, P. Z. S. 1875, p. 105; id. Ibis 1889, p. 280, et vol. seq.; Everett, L. B. Born. p. 105.

A great series collected at the foot and on the slopes of Mount Kenepai, at Nanga Raoen, in the Siniai valley, on the Liang Koeboeng, and numerous specimens collected at Long Bloe (Upper Mahakkam). — Iris dark brown, skin of face and chin underneath the feathers purplish blue, on the sides of the chin more cobalt; bill black, base of the lower mandible pale blue, feet grayish blue. — A fairly common species, especially at an altitude of about 500—800 m., living in jungle and the undergrowth of high forest.

Hab. Spread over the whole island of Borneo.

188. *Cyanoderma poliogaster.*

Stachyris poliogaster Hume, Str. Feath. IX, p. 116 (1880).
Stachyridopsis poliogaster Sharpe, Cat. B. Br. Mus. VII, p. 599.
Cyanoderma poliogaster Sharpe, N. L. M. 1884, p. 176.

A single specimen (♀) obtained on Mount Liang Koeboeng. — This bird fully agrees with the description of the typical specimen, which was hitherto the only one known to represent this species, and is therefore new to Borneo. — It is a true jungle-bird, and was shot in thick rattan-jungle, close to the ground. — Iris red, bill horny gray, lower mandible reddish at the base, feet greenish gray.

Hab. Johore (in the southernmost part of the Malay Peninsula) and Liang Koeboeng (Borneo).

189. *Mixornis borneensis.*

Mixornis borneensis Bp. Consp. I, p. 217 (1850); Salvad. Ucc. Born. p. 215; Everett, L. B. Born. p. 107; Sharpe, Ibis 1889, p. 416.

Ten specimens from Pontianak, Smitau, Nanga Raoen and Poelau, consequently all from the lowland of the Kapoeas basin, and five specimens from Long Bloe (Upper Mahakkam). — If there is any reason to separate this species from *M. javanica,* it can only be based upon the somewhat broader dark stripes on throat and breast, though it must be said that in some of the Bornean specimens of the Leyden Museum these stripes are not broader than in some Javan ones. — Iris pale orange, facial skin pale blue, bill black, lower mandible bluish horn-color, feet grayish green.

Hab. Borneo, where it seems to have a general distribution.

190. *Macronus ptilosus.*

Macronus ptilosus Jard. & Selby, Ill. Orn. pl. 150 (1835); Salvad. Ucc. Born. p. 216; Sharpe, Ibis 1889, p. 282; Everett, L. B. Born. p. 108.

Numerous specimens from the foot and the slope of Mount Kenepai, Nanga Raoen, the Liang Koeboeng, from Poelau on the Sibau River and from the Upper- and Lower Mahakkam. — Iris dark brown, skin above the eye sea-green, on chin and face purplish blue; bill black, lower mandible greenish, feet dark brown, soles ochre.

Hab. Malayan Peninsula, Sumatra and Borneo, where it is generally distributed.

Field-notes of Mr. von Berchtold: »Man trifft diese zutraulichen und wenig scheuen Vögel stets in dichtem Busch zu zweien oder in grösserer Gesellschaft, sich von Ast zu Ast, von Strauch zu Strauch herumtreibend und nach Nahrung suchend. Ihr ganzes munteres Benehmen ist so possierlich, dass es eine Freude ist, demselben zuzusehen. Ihr Hauptlockton ist ein leises »fih" mit rasch hinter einander folgenden kurz ausgestossenes »kuku-kuku-

kuku". Ausser dem Hauptlockton stösst das Männchen zuweilen einen sehr eigenthümlichen, meckernden Ruf aus. Das Nest findet man unter der dichten Krone grossblätteriger, aber niedriger Bäume im gemischten Wald. Dieses hat die Grösse eines Eichhörnchennestes und hat durch die zusammengefügten und zusammengerollten Blätter Seiteneingänge zu der Mitte des Baues der eigentlichen Lagerstätte, worin der Vogel übernachtet. Ein solches Nest, das ich bei hereinbrechender Dunkelheit entdeckt habe und aus welchem fünf dieser Vögel flüchteten, fand ich am 15. Mai 1897 im Walde bei Lontopee am Koeteiflusse."

191. *Turdinus atrigularis.*

Myiothera atrigularis Temm. M. S. in Mus. Lugd.
Cacopitta atrigularis Bp. (ex Temm. M. S.) Consp. I, p. 257 (1850).
Turdinus atrigularis Blyth, Ibis 1870, p. 170; Salvad. Ucc. Born. p. 217; Sharpe, Cat. B. Br. Mus. VII, p. 549; Everett, L. B. Born. p. 109; Sharpe, Ibis 1889, p. 414; Büttik. N. L. M. 1895/6, p. 70.

Six specimens from the western slope of the Liang Koeboeng and a female from the Upper Mahakkam. — A terrestrial bird, living in the undergrowth of high forest and feeding upon insects. — Iris brown, bill black, base of lower mandible horny whitish, feet brownish flesh-color.

Hab. Restricted to Borneo, where it seems to be spread over the whole island.

192. *Ptilopyga leucogrammica.*

Myiothera leucogrammica Temm. MS. in Mus. Lugd.
Cacopitta leucogrammica Bp. Consp. I, p. 257 (1850).
Turdinus leucogrammicus Salvad. Ucc. Born. p. 217.
Ptilopyga leucogrammica Everett, L. B. Born. p. 110; Büttik. N. L. M. Vol. XVII, p. 72.

An adult male from the Bruny River (Upper Mahakkam). — Iris reddish brown, bill and feet horny brown.

Hab. Western and Central Borneo.

193. *Turdinulus exsul.*

Turdinulus exsul Sharpe, Ibis 1888, p. 479; id. id. 1889, p. 418;

Everett, L. B. Born. p. 111; Büttik. N. L. M. 1895/6, p. 76.

Ten specimens from the western slope of the Liang Koeboeng, at an altitude of 800—1000 m. — This species has quite terrestrial habits, living in the thick undergrowth of the high forest.

For the color of naked parts see my full description of the bird, N. L. M. 1895/6, p. 77.

Hab. Borneo (elevations above 800 m.).

194. *Malacocincla Abbotti.*

Malacocincla Abbotti Blyth, J. A. S. Beng. XIV, p. 601 (1845); Salvad. Ucc. Born. p. 230; Büttik. N. L. M. 1895/6, p. 79.
Myiothera concreta S. Müll. MS. in Mus. Lugd.
Myiothera Schwaneri Temm. MS. in Mus. Lugd.
Turdinus Abbotti Sharpe, Cat. B. Br. Mus. VII, p. 541; Everett, L. B. Born. p. 108.

An adult male collected near Poelau, on the Sibau River. Living quietly in brushwood near the ground. — Iris brownish red, bill horny gray, feet flesh-color. As to this species see the annotations in my above-cited note.

Hab. Indian Continent, Malay Peninsula and Borneo. On this latter island it has been found in the southern part on the Barito River (Müller, Schwaner, Mottley) and by myself on the Sibau River.

195. *Malacocincla rufiventris.*

Malacocincla rufiventris Salvad. Ucc. Born. p. 229 (1874); Büttik. N. L. M. 1895/6, p. 82.
Ptilopyga rufiventris Sharpe, Cat. B. Br. Mus. VII, p. 585; Everett, L. B. Born. p. 110; Hose, Ibis 1893, p. 388.
Turdinus tephrops Sharpe, Bull. Br. Orn. Club, N°. 10, p. 54 (1893); id. Ibis 1893, p. 549.

A great number of specimens from the western slope of Mount Liang Koeboeng and one from the upper Sibau River. This bird is found along the ground in shrubs and high forest. — Iris brown, bill black, lower mandible horny whitish, feet brownish flesh-color.

Hab. Mountains of Sarawak and Central Borneo. (See my remarks about this species in N. L. M. 1895, p. 82).

196. *Anuropsis malaccensis.*

Myiothera poliogenys S. Müll. MS. in Mus. Lugd.
Brachypteryx malaccensis Hartl. Rev. Zool. 1844, p. 402; Salvad. Ucc. Born. p. 222.
Brachypteryx poliogenis Strickl. Contr. Orn. 1849, p. 93, pl. 31.
Anuropsis malaccensis Sharpe, Cat. B. Br. Mus. VII, p. 588; id. Ibis 1889, p. 418; Everett, L. B. Born. p. 110; Büttik. N. L. M. 1895/6, p. 84.
Amauropsis malaccensis Sharpe, Ibis 1894, p. 543.

Six specimens and a nestling collected on Mount Kenepai, six on Mount Liang Koeboeng, one near Poelau on the Sibau River and three specimens on the Upper Mahakkam. — Iris dark brown, bill black, lower mandible horny blue, feet flesh-color. The specimen from Poelau has the quills and tail-feathers broadly edged with rufous, which peculiarity is due to its immaturity.

In my above cited note I have already pointed to the difference in color, probably due to the different localities, of this species. Having no sufficient material, especially from the Malay Peninsula and Sumatra, at my disposal, I cannot tell about the specific value of these differences, but I may be allowed to observe that our two Sumatran specimens have their upper surface browner than all our Bornean birds. Strange enough, there is no difference in coloration amongst my 13 specimens from different localities, though both sexes are represented. All, except the above mentioned immature bird from Poelau, have the upper surface, with inclusion of the crown, olive, becoming more brown on rump and upper tail-coverts, while the tail-feathers are earthy brown and edged with rufous brown towards the base. From these the Sumatran specimens in the Leyden Museum differ in having the whole upper surface more ruddy brown and the tail-feathers entirely rufous. If all our Bornean specimens would be alike those mentioned above, they could be easily distinguished; there are, however, two specimens from southern Borneo, belonging to the types of *Myiothera poliogenys* Müll. MS., and two specimens from Trusan (A. Everett) with the tail rufous like in our Sumatran specimens; they have, moreover, the crown strongly tinged with rufous, which is not the case with my specimens from the Kapoeas-region.

Our specimens, both from South and Central Borneo, are, moreover, much more richly tinged with orange rufous on the lower surface than those from Trusan and from Sumatra. The nestling agrees tolerably well with the adult bird in color, but has the back and quills reddish brown.

Hab. Malay Peninsula, Sumatra and Borneo, where the species seems to be spread over the whole island.

197. *Orthnocichla* ¹) *Whiteheadi.*

Orthnocichla Whiteheadi Sharpe, Ibis 1888, p. 478 (Kina Balu); id. id. 1889, p. 410, pl. XII; Everett, L. B. Born. p. 111 (1889); Sharpe, Ibis 1894, pp. 421 (Mt Kalulong) and 543 (Mt Mulu).

Two females obtained on Mount Liang Koeboeng at an altitude of 900 m. — Iris dark brown, bill black, base of lower mandible whitish. — A very quiet bird, living in the undergrowth of the forest, where it is found hopping along the ground.

Hab. Northern, North-western and Central Borneo.

198. *Trichostoma rostratum.*

Trichostoma rostratum Blyth, Journ. As. Soc. Beng. XI, p. 795 (1842); Bp. Consp. I, p. 259; Sharpe, Cat. B. Br. Mus. VII, p. 562; Everett, L. B. Born. p. 10; Sharpe, Ibis 1889, p. 416; Büttik. N. L. M. 1895/6, p. 87.

Malacopteron rostratum Blas. Verh. z. b. Ges. Wien, XXXIII, p. 63.

Brachypteryx umbratilis Salvad. Ucc. Born. p. 220.

Adult male and female (N°s 1280 and 1223 of my collecting list), both from Nanga Raoen, and shot on May 13th 1894,

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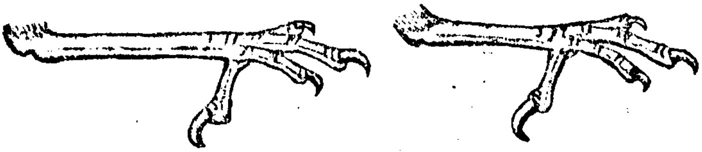
1) This genus, though in a strong degree showing affinities with *Anuropsis*, ought perhaps to be placed amongst the Wrens.

in the jungle of an abandoned plantation. — Iris reddish brown, bill black, lower mandible grayish horn-color, feet flesh-color.

Hab. Malay Peninsula, Sumatra and Borneo.

In my above-quoted revision of the genus *Turdinus* and allied genera, I have already called the attention upon the curious fact that the male (N° 1280) has the tarsi abnormally short (18 mm. instead of 25), although this abnormity cannot be ascribed to rhachitis or any other obvious disease. This striking fact is plainly shown in the adjoined figures which my friend Dr. Finsch was kind enough to draw for this purpose. The bird in question is in every other respect a true *T. rostratum*, though the shortness of the tarsi does not agree at all with the character of the genus, which latter is chiefly based upon the tarsus being half the length of the tail.

Foot of *Trichostoma rostratum.*



N. B. On his last journey on the Upper Mahakkam (November 1898 to March 1899), Dr. Nieuwenhuis obtained seven males and eight females, some of which were immature or still in down, but even the latter had the tarsus of normal length, i. e. 24—27 mm. A young bird, partly in down, has the upper surface, wing and the still very short tail of the same color as the adult bird, but the downy lower surface is dirty gray with a rufous tinge, and the base of the feathers white.

199. *Trichostoma canicapillum.*

Turdinus canicapillus Sharpe, Ibis 1887, p. 450 (Kina Balu); id. id. 1889, p. 415; id. id. 1890, p. 367 (Mt Penrisen), p. 433 (Mt Dulit), p. 547 (Mt Kalulong), p. 550 (Mt Poeh), p. 542 (Mt Mulu); Everett, L. B. Born. p. 108.

Trichostoma canicapillum Büttik. N. L. M. 1895/6, p. 89.

Three specimens from Mt Liang Koeboeng (800—900 m.). Frequenting the undergrowth of high forest. — Iris brown, bill horny gray, feet brown. — As I have pointed out in my above-cited paper, this species must be separated from the genus *Turdinus* and brought under *Trichostoma*.

Hab. Kina Balu, the mountains of Sarawak, and Central Borneo.

200. *Drymocataphus capistratoides*.

Myiothera capistratoides Temm. MS. in Mus. Lugd.

Drymocataphus capistratoides Strickl. Contr. Orn. 1851, p. 16; Salvad. Ucc. Born. p. 218; Sharpe, Cat. B. Br. Mus. VII, p. 555; Everett, L. B. Born. p. 109 (1889); Sharpe, Ibis 1889, p. 415; Büttik. N. L. M. 1895/6, p. 91.

An adult male from Pontianak and another from the foot of Mount Kenepai, where it was found in brushwood, and five specimens from the Upper- and Lower Mahakkam. — Iris brown, bill black, below white, feet brown.

Hab. Borneo (spread over the whole island).

201. *Erythrocichla bicolor*.

Brachypteryx bicolor Less. Rev. Zool. 1839, p. 138.

Malacopteron ferruginosum Blyth, J. A. S. Beng. XIII, p. 383 (1844); Salvad. Ucc. Born. p. 228.

Trichostoma bicolor, Blyth, Cat. B. Mus. As. Soc. p. 147 (1849); Bp. Consp. I, p. 259 (ex Müll. MS. in Mus. Lugd.).

Napothera rubicauda Bp. Consp. I, p. 359.

Erythrocichla bicolor Sharpe, Cat. B. Br. Mus. VII, p. 551; id. Ibis 1889, p. 415; Everett, L. B. Born. p. 109; Büttik. N. L. M. 1895/6, p. 98.

Two adult males, from the foot of Mount Kenepai and from Nanga Raoen; also from the Upper Mahakkam. Obtained in brushwood near the ground. — Iris pale brown, bill brown, below horn-color, feet flesh-color.

Hab. Malay Peninsula, Sumatra and the whole island of Borneo.

202. *Trichixus pyrrhopygus.*

Trichixos pyrrhopygus Less. Rev. Zool. 1839, p. 167; Salvad. Ucc. Born. p. 224; Everett, L. B. Born. p. 99; Sharpe, Ibis 1889, p. 269.

An adult male and a female, both collected in March at an altitude of 800 m., in the high forest region on the western slope of the Liang Koeboeng Mountain. — Iris blood-red, bill black, feet flesh-color. — The female looks much like an immature bird, on account of the fulvous markings on front and the sides of head and neck, but in looking over the specimens in the Leyden Museum, I find that the four fulvous-throated birds, which all are marked females, show the same characteristics, so that this might be the really adult stage of the female of this species. On the other hand I have to state the fact that one of our gray-throated adult birds, collected by Schwaner, is marked »female" on the label.

This species, which frequents the undergrowth of the high forest and is often seen hopping along the ground, is found in Malacca (Wallace a. o.), in Sumatra (a specimen from Padang in Mus. Lugd., collected by S. Müller) and in Borneo. On this latter island it has been recorded from the North and from Sarawak, while the Leyden Museum contains specimens from Pontianak (Diard) and from the Barito River (Schwaner and S. Müller).

203. *Malacopteron magnum.*

Malacopteron magnum Eyton, P. Z. S. 1839, p. 103; Sharpe, Cat. B. Br. Mus. VII, p. 564; Everett, L. B. Born. p. 106; Büttik. N. L. M. 1895/6, p. 102.
Malacopteron majus Salvad. Ucc. Born. p. 225.

A large series, obtained at the foot of Mount Kenepai and in the Liang Koeboeng Mountain, 700—800 m., where it is a rather common bird, living in the high forest. Also from the Upper Mahakkam. The males are a trifle larger than the females, and have a longer bill. — Iris red, bill blackish, lower mandible horn-color, feet pale grayish blue, soles ochre.

Hab. Malay Peninsula, Sumatra and Borneo, where it is found in the South (Moeara Teweh), at the Sandakan Bay and in Sarawak.

204. *Malacopteron cinereum.*

Malacopteron cinereum Eyton, P. Z. S. 1839, p. 103; Sharpe, Cat. B. Br. Mus. VII, p. 565; id. Ibis 1889, p. 416; Everett, L. B. Born. p. 105; Büttik. N. L. M. 1895/6, p. 103.
Malacopteron magnum Salvad. Ucc. Born. p. 226.

A great series obtained at the foot of Mount Kenepai, at Nanga Raoen, in the Siniai Valley and on the western slope of the Liang Koeboeng, in which latter locality, at an altitude of about 700—800 m. above the sea, it is a very common bird, living in the undergrowth of the high forest. Also from the Upper Mahakkam. — Iris reddish brown, bill horn-color, base of lower mandible flesh-color, feet pale flesh-color.

Hab. Malacca, Sumatra and Borneo, where it is recorded from the North, the North-west (Sarawak) and the Centre of the island.

205. *Malacopteron affine.*

Trichastoma affine Blyth, J. A. S. Beng. XI, p. 795 (1842).
Napothera atricapilla Bp. Consp. I, p. 359 (Type in Mus. Lugd.).
Setaria affinis Salvad. Ucc. Born. p. 231.
Malacopterum affine Sharpe, Cat. B. Br. Mus. VII, p. 569; Everett, L. B. Born. p. 106; Sharpe, Ibis 1889, p. 416; Büttik. N. L. M. 1895/6, p. 105.

Nine specimens obtained at Pontianak, at the Southern foot of Mount Kenepai, at Nanga Raoen (Mandai Valley) and at Poelau (Sibau Valley). Twelve specimens from the Upper Mahakkam. — This species lives in low forest, feeding upon insects. Younger specimens differ from the adult in having the quills and wing-coverts broadly edged with rusty-red instead of olive-brown; a probably adult bird shows the peculiarity, already mentioned by Dr. Sharpe (l. c.), of having the throat striped with olive-brown, while, as a rule, it ought to be uniform ashy white. — Iris red or reddish brown, bill horny gray, feet bluish gray.

Hab. Malay Peninsula, Sumatra and Borneo, where it seems to have a general distribution, as it is recorded from the South (by Grabowsky), from Laboean and from Sarawak. It seems to be a lowland species, but reaching up to 1000 feet on Mount Mulu (see Sharpe, Ibis 1894, p. 542).

206. *Malacopteron kalulongae.*

Turdinus kalulongae Sharpe, Bull. Br. Orn. Club, N° X, p. 54 (1893); id. Ibis 1893, pp. 548 and 568; id. id. 1894, p. 542.
Malacopteron kalulongae Büttik. N. L. M. 1895, p. 106.

An adult male from Mount Kenepai and another from Mount Liang Koeboeng. Obtained in the undergrowth of the mountain-forest. — Iris gray, bill gray, lower mandible whitish, feet grayish blue.

Hab. The mountain-regions of Sarawak and Central Borneo. Dr. Sharpe recently separated this species from *M. magnirostre* on ground of its dark crown and the want of dusky streaks on the throat. I may not neglect to say, however, that only in the specimen from Mount Kenepai the throat is entirely unstriped, while in that from Mount Liang Koeboeng the longitudinal dusky streaks on the throat, so characteristical in *M. magnirostre*, are rather distinct, so that our species differs in fact from *M. magnirostre* only by the blackish crown. At the first glance one might be inclined to consider the specimen from Mount Liang Koeboeng as a valid different species on account of its striped throat, but the same peculiarity being found in the most closely allied *M. affine*, I consider it more reasonable to unite both birds under one and the same species. In fact there are amongst the great number of sooty brown-crowned *M. affine*, which I collected in Borneo, many specimens with the throat plain white, while in others the throat is more or less distinctly striped with gray. These stripes cannot be ascribed either to the sex of the birds or to nonage, an immature specimen from Nanga Raoen showing no stripes at all.

The size of both my specimens of the present species is inferior to that mentioned by Sharpe in his Birds from Mount Kalulong, but having not seen that specimen myself, I dare not consider them as specifically distinct.

207. *Kenopia striata.*

Timalia striata Blyth, J. A. S. Beng. XI, p. 793 (1842).
Myiothera leucostigma S. Müll. MS. in Mus. Lugd.
Turdirostris leucostigma Bp. Consp. I, p. 218.
Kenopia striata Salvad. Ucc. Born. p. 223, pl. V, fig. 2; Sharpe, Cat. B. Br. Mus. VII, p. 573; Everett, L. B. Born. p. 109; Sharpe, Ibis 1889, p. 416.

Three specimens from Mount Kenepai. A terrestrial bird, living in brushwood. — Iris grayish brown, bill black, feet pale flesh-color. — A nearly fledged nestling only differs from the adult birds in having the clear shaft-stripes on the crown more rufous than white and the crown itself dark olive-brown instead of black, and the rusty white patch in front of the eye is wanting, this part being of the same color as the crown.

Hab. Malacca and Borneo, where it is spread over the North-east, the North, the North-west and the Centre of the island.

208. *Rhinomyias pectoralis.*

Alcippe pectoralis Salvad. Atti R. Ac. Sc. Tor. 1868, p. 530.
Setaria pectoralis Salvad. Ucc. Born. p. 233, pl. IV, fig. 1.
Rhinomyias pectoralis Sharpe, Cat. B. Br. Mus. IV, p. 368; id. Ibis 1889, p. 201.

Four specimens from the Liang Koeboeng and two from the Upper Mahakkam. — Iris brown, bill black, feet bluish white.

Hab. This species seems to be spread over whole Borneo, as it is recorded from the most different localities. In the Leyden Museum are some specimens collected by Schwaner on the Barito River and at Pontianak. Besides from Borneo this species is hitherto only known from Sumatra, where it was collected by S. Müller.

209. *Rhinomyias ruficrissa.*

Rhinomyias ruficrissa Sharpe, Ibis 1887, p. 441; id. id. 1889, p. 200; Everett, L. B. Born. p. 131; Sharpe, Ibis 1892, p. 435.

An adult male from the western slope of the Liang Koeboeng. — Iris dark brown, bill black, feet whitish blue.

Hab. Borneo, where it seems to be restricted to the mountain-regions. Hitherto known from Mount Kina Balu, Mount Dulit, Mount Kalulong, Mount Penrisen and Mount Liang Koeboeng.

210. *Alcippe cinerea.*

Alcippe cinerea Blyth, J. As. Soc. Beng. XIII, p. 384 (1844); Sharpe, Cat. B. Br. Mus. VII, p. 622; id. N. L. M. 1884, p. 178 (partim) 1); id. Ibis 1889, p. 283; Everett, L. B. Born. p. 106.
Alcippe pyrrhoptera (partim) Salvad. Ucc. Born. p. 234.

A great number of specimens from the Mounts Kenepai and Liang Koeboeng, where it is a regular forest-bird, feeding upon insects. — Iris gray, bill horny gray, feet gray.

Hab. Malacca, Sumatra (Leyd. Mus.) and Borneo, where it is recorded from the South (Schwaner, Leyd. Mus.), from Sandakan, Kina Balu and the mountain-regions of Sarawak.

Pittidae.

211. *Pitta cyanoptera.*

Pitta cyanoptera Temm. Pl. Col. 218 (1823); Schleg. Vog. Ned. Ind. *Pitta*, pp. 9 and 32, pl. 4, fig. 1; Salvad. Ucc. Born. p. 235; Everett, L. B. Born. p. 147; Sharpe, Ibis 1889, p. 442.

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1) In this paper Sharpe identified the specimens of *Napothera phaionota* Kuhl MS. from Java in the Leyden Museum with *Alcippe cinerea* Blyth. This opinion is decidedly wrong, as *N. phaionota* undoubtedly belongs to *Alcippe pyrrhoptera*, of which the Leyden Museum possesses a great number of specimens from Java and Sumatra. Salvadori (l. c.) mentions *Alcippe pyrrhoptera*, but I feel sure that a re-examination of his specimens from Borneo, if really obtained on that island, will prove that they belong to *A. cinerea*.

An adult female, obtained in the mountain-forests of the Liang Koeboeng range, and a male and three females, all similar in color, from the Upper Mahakkam. — Iris hazel, bill dark brown, feet pinkish flesh-color.

Hab. The whole south-eastern corner of Asia, Sumatra (Mus. Lugd.) and Borneo.

212. *Pitta Mülleri.*

Pitta atricapilla (partim) Temm. Pl. Col. II, Genre *Pitta*, Esp. 6 (1830); (partim) Müll. & Schl. Verh. Zool. Aves, pp. 9 and 19; Schleg. Vog. Ned. Ind. *Pitta*, pp. 6 and 31, pl. 2, figs. 2 and 3.
Pitta Mülleri Bp. Consp. I, p. 256 (1850); Salvad. Ucc. Born. p. 240; Everett, L. B. Born. p. 149; Sharpe, Ibis 1889, p. 443; Whitehead, Ibis 1893, p. 499.

Three specimens from Sanggau, Nanga Raoen, Poetoes Sibau, Poelau, also from the Upper Mahakkam. — Iris dark brown, bill black, feet grayish brown.

Hab. Sumatra, Banka, Java (Coll. Vorderman in Mus. Lugd.) and Borneo.

Field-notes of Mr. von Berchtold: »Dieser scheue Vogel scheint nur dichtes Ufergebüsch, durchmischt mit hoher Grasvegetation, namentlich aber die dichten Bestände der *Elettaria speciosa* zu lieben. Indessen kann man seine Anwesenheit fast immer constatiren, da er mit Ausnahme der heissen Mittagszeit beinahe den ganzen Tag ein in kurzen Zwischenräumen wiederholtes »fih, fih" hören lässt". — Ich habe im Buschwald von Poelau bei diesem Vogel einen hübschen Gesang beobachtet (Büttik.).

213. *Pitta coerulea.*

Myiothera coerulea Raffl. Trans. Linn. Soc. XIII, p. 301 (1822).
Pitta coerulea Everett, L. B. Born. p. 147.

One specimen from the Upper Mahakkam. — Iris brown, bill and legs brown.

Hab. Malay Peninsula, Sumatra and Borneo.

214. *Pitta arcuata.*

Pitta arquata Gould, Ann. and Mag. Nat. Hist. ser. 4, VII, p. 340 (1871).

Pitta arcuata Salvad. Ucc. Born. p. 241; Everett, L. B. Born. p. 148 Sharpe, Ibis 1889, p. 441.

An adult male from Mount Kenepai and three females from Long Bloe (Upper Mahakkam). — Iris grayish blue, bill black, feet purplish blue.

Hab. Borneo generally.

215. *Pitta granatina.*

Pitta granatina Temm. Pl. Col. 506 (1830); Schleg. Vog. Ned. Ind. *Pitta*, pp. 20 and 35, pl. 5, fig. 3; Salvad. Ucc. Born. p. 242; Everett, L. B. Born. p. 148; Whitehead, Ibis 1893, p. 502.

Two adult females from Nanga Raoen, and an adult male from Poelau. — Iris dark grayish brown, bill black, feet purplish blue.

Hab. Lowlands of Borneo, where it seems to be generally distributed.

216. *Pitta Baudi.*

Pitta Baudi Müll. & Schl. Verh. Zool. *Pitta*, pp. 10, 15 and 20, pl. II (1839—44); Salvad. Ucc. Born. p. 243; Sclat. Cat. B. Br. M. XIV, p. 444; Everett, L. B. Born. p. 149; Sharpe, Ibis 1889, p. 441.

Adult male and female (Dr. Nieuwenhuis, 1899).

Hab. Borneo.

217. *Pitta Schwaneri.*

Pitta Schwaneri Bp. Consp. I, p. 256 (1850); Schleg. Vog. Ned. Ind. *Pitta*, pl. 6, fig. 4; Salvad. Ucc. Born. p. 243; Everett, L. B. Born. p. 149; Sharpe, Ibis 1889, p. 442.
Eucichla Schwaneri Whitehead, Ibis 1893, p. 508.

Six specimens from the mountain-forests of the Liang Koeboeng range. — Iris dark brown, bill black, feet purplish gray.

Hab. Mountain-regions of Borneo.

Sylviidae.

218. *Phylloscopus borealis.*

Phyllopneuste borealis Blasius, Naumannia 1858, p. 313.

Phyllopneuste javanica et *magnirostris* Salvad. Ucc. Born. p. 244.
Phylloscopus borealis Everett, L. B. Born. p. 96.

A number of specimens obtained at Smitau, Mounts Kenepai and Liang Koeboeng between December 8th and April 27th, in low jungle. Also 12 specimens obtained by Dr. Nieuwenhuis on the Upper Mahakkam (Oct. 24th to Dec. 23rd 1898). Most of these latter have the feathers much abraded and the white tips on the wing-coverts in most of the specimens wanting. There is no difference to be observed in the obtained specimens with regard to the date at which they were shot, but two of them, both shot at Smitau, probably younger birds, are greener above and tinged with yellow on the superciliary streak and on the throat and breast, while in one of them the greater wing-coverts are moreover tipped with white. — Iris black, bill brown, lower mandible flesh-color at the base, feet flesh-color.

This species breeds in the North of Eastern Asia and is only a winter visitor in Borneo, where it is recorded from North-west and North Borneo (Beccari, Everett, Ussher, Whitehead), and from Pontianak (Mus. Lugd.).

219. *Phylloscopus xanthodryas.*

Phylloscopus xanthodryas Swinhoe, P. Z. S. 1863, p. 42; Everett, L. B. Born. p. 97; Sharpe, Ibis 1889, p. 265.

A single specimen obtained on January 31st on Mount Kenepai. — Upper surface lively olive-green, lower surface and superciliary streak and under wing-coverts lemon-yellow. — Iris black, culmen dark brown, rest of bill whitish, feet yellowish gray, tarsi brown.

This species breeds in North-eastern Asia and is, as it seems, rarely found as a winter visitor in Borneo. Laboean, N. E. Borneo (Low, Treacher), Kina Balu (Whitehead).

220. *Orthotomus ruficeps.*

Orthotomus ruficeps Less. Traité d'Orn. p. 309 (1831); Salvad. Ucc. Born. p. 248; Sharpe, Ibis 1889, p. 279; Everett, L. B. Born. p. 101.

An adult male, from Pontianak, an adult male and female, both similar in color, obtained in May at Nanga Raoen, an immature male with red tail but the red on the head not yet fully developed from Smitau (Dec. 9th) and a young male from Poelau, Sibau R. (April 15th). Four specimens from the Upper Mahakkam. The specimen from Poelau has, in strong contrast to the adult birds, the upper surface olive-green and the white lower surface, and especially the sides of head and neck, very strongly washed with yellow. A few red feathers are making their appearance on the olive-green crown, while on the tail the red color is more strongly developed. — The iris in the adult birds is brick-red, the upper mandible brown, the lower whitish, feet pale flesh-color; in the young bird the iris is gray, the lower mandible yellow.

This species is found round the native settlements, very often together with the following species. In the jungle and high forest it was never observed.

Hab. The Indo-Malayan region, Java excepted, and the Philippines. In Borneo it seems to be a rather common bird over the whole island.

221. *Orthotomus atrigularis.*

Orthotomus atrogularis Temm. Pl. Col. III, text in livr. 101 (1836); Salvad. Ucc. Born. p. 249; Sharpe, Cat. B. Br. M. VII, p. 220; Everett, L. B. Born. p. 102.

An adult male (Dr. Nieuwenhuis, 1899), exactly alike other specimens from Borneo and Billiton (Dr. Vorderman).

Hab. From Burmah through the Malay Peninsula to Sumatra, Billiton and Borneo.

222. *Orthotomus cineraceus.*

Orthotomus cineraceus Blyth, Journ. A. S. Bengal. XIV, p. 589 (1845); Sharpe, Ibis 1889, p. 279; Everett, L. B. Born. p. 102.
Orthotomus borneoensis Salvad. Ucc. Born. p. 248; Sharpe, Ibis 1876, p. 41, pl. II.

A fine series of both sexes from Smitau, Nanga Raoen, Mt Liang Koeboeng (780 m.) and Poelau. Five specimens were also obtained by Dr. Nieuwenhuis in the winter 1898—99 on the Upper Mahakkam. — Iris brownish orange, bill flesh-color, culmen dark brown, feet pale flesh-color.

This species has a rather wide distribution, as it is recorded from Malacca, Sumatra and Billiton, and seems to be spread over the whole island of Borneo. From Java it is not mentioned in literature, but the Leyden Museum contains three specimens bearing »Java" on their labels. It is a rather curious fact that a specimen was killed as high up as my station on the slope of the Liang Koeboeng, the nearest human habitations being far off from this place at the bottom of the valley.

223. *Burnesia superciliaris.*

Prinia superciliaris Salvad. Ucc. Born. p. 249 (1874).
Burnesia superciliaris Sharpe, Cat. B. Br. Mus. VII, p. 206; id. Ibis 1889, p. 278; Everett, L. B. Born. p. 102.

A small number of adult and immature birds from Smitau, Nanga Raoen, Poetoes Sibau, Poelau and the Upper Mahakkam. — Iris brown, bill black (in young specimens yellow), feet and claws flesh-color, in some specimens wax-yellow. — It frequents the vicinities of settlements, where it is found in low brushwood and alang-alang fields.

Hab. This species is restricted to Borneo, where it seems to be spread over the whole island.

224. *Acrocephalus orientalis.*

Salicaria turdoides orientalis Temm. & Schl. Faun. Jap. Aves, p. 50, pl. XX B (1847).
Acrocephalus orientalis Salvad. Ucc. Born. p. 251; Everett, L. B. Born. p. 97; Sharpe, Ibis 1889, p. 266.

A bird of the year, with dark shaft-streaks on the throat, obtained May 12th at Nanga Raoen. — Iris grayish brown, bill brown, lower mandible flesh-color, feet dark grayish brown.

This eastern form of our *A. turdoides* breeds in Eastern

Asia and passes the winter-months in Southern Asia and the Malay Archipelago; in Borneo it is recorded from the North-East (Beccari, Everett, Ussher, Low, Treacher, Whitehead), Borneo (Mus. Lugd.).

Saxicolidae.

225. *Cittocincla suavis.*

Copsychus suavis Sclat. P. Z. S. 1861, p. 185.
Xittacincla suavis Salvad. Ucc. Born. 252; Everett, L. B. Born. p. 100.

Two adult males and a female, all collected at Nanga Raoen, where we found it in low forest, and three specimens from Poetoes Sibau, the Upper- and the Lower Mahakkam, collected by Dr. Nieuwenhuis. The specimen from the Lower Mahakkam is immature, showing some remnants of the brown-spotted dress of the young bird, especially on neck and upper wing-coverts. — Iris coffee-brown, bill glossy black, feet purplish white.

The male N° 1254 and the female N° 1255 (matched) were shot near their nest (N° 1248^a) on May 15th in an old, deserted plantation. The nest was placed in a hollow tree ten feet above the ground, and consists of a coating of dead leaves lined with rootlets, small feathers and the abdominal scales of a snake. It contained two eggs of a bluish green color, very thickly speckled all over with reddish brown. Size of the eggs 2,3 + 1,8 cm. As both eggs were already fairly set, it is very probable that two is the regular number of the clutch in this species.

This exclusively Bornean species is known from the southeastern, southern, western, north-western and central parts of the island. In the North it is represented by the white-crowned *C. Stricklandi* Motley & Dillwyn.

»Ein äusserst gewandter, munterer, doch sehr scheuer Vogel. In stets aufgerichteter Stellung, doch unruhig, sieht er sich immerwährend nach allen Seiten um, und mit stark ausgebreiteten Schwung- und Schwanzfedern, etwas bogenförmig gehaltenen und stark bewegten Flügeln und wip-

pendem Schwanze, lässt er seinen schönen, kräftigen Gesang, ausgenommen in der Mittagszeit, den ganzen Tag mit grösseren und kleineren Zwischenräumen im dichten Busch ertönen. Dieser Gesang besteht anfangs aus leisen piependen, dann trillernden mannigfaltigen, schliesslich starken und schwachen, sonderbar abwechselnden, steigenden und fallenden Tönen. Derselbe wird aber noch schöner und angenehmer, indem er zuweilen durch die Nachahmung des Gesanges anderer Vögel vermannigfacht wird. Er ist unstreitig der beste Sänger von Borneo und erinnert dem Gesange nach an unsern europäischen Rohrsänger. Durch nachgeahmten Schlag wird man oft den Vogel augenblicklich herbeilocken. Mit aufgebauschtem Gefieder und scheinbar kampfbereit erscheint der gestörte Sänger, um wahrscheinlich seinen Nebenbuhler aus dem Reviere zu vertreiben. Doch kaum hat er den Beobachter bemerkt, so ist der Vogel schon wieder verschwunden. Er sitzt dann irgendwo in der Nähe, still doch gut geborgen, und erwartet das neue Gepfeife. Dann aber beginnt er zu trillern und zu schlagen mit solch mannigfaltigen Variationen, dass es ein wahrer Genuss wird, diesem Gesange zuzuhören. Der Vogel wechselt den Standplatz jeden Augenblick, verlässt aber den Beobachter nicht, sobald dieser zeitweise irgend etwas vorpfeift. Ich hatte die Freude, einen dieser Vögel das Militärsignal »Vorwärts" in circa 40 Minuten gelehrt zu haben. Des anderen Tages hörte ich in derselben Gegend den Vogel die neu erlernte Melodie, doch mit einigen schönen Variationen, pfeifen. Ich ahmte den Lockruf »fi, fi, fi", nach und pfiff darauf das Militärsignal, worauf der Vogel sofort erschien und der Unterricht von Neuem begann.

Die Kayan-Dajaks in Mendalam (oberer Kapuas) zollen diesem Vogel eine ganz besondere Verehrung. Sie betrachten ihn als den Ueberbringer der Botschaften guter Geister. Soll eine Reise angetreten werden, so befragen die Dajaks zuerst die guten Geister, wann sie dieselbe antreten sollen, um unterwegs auf kein Unglück zu stossen, indem sie den Aufflug des Vogels beobachten. Fliegt derselbe nach rechts,

so betrachten die Dajaks als ein günstiges Zeichen von seiten der Geister. Es wird nun diesen zu Ehren ein kleines Feuer angemacht und in einem Bambusrohr etwas Reis gekocht. Ist der Reis gar, so nimmt jeder der sich an der Reise betheiligen will, eine Fingerspitze voll Reis zu sich, worauf der Marsch unverzüglich angetreten wird in der festen Ueberzeugung, dass während der Reise kein Unglück geschehen wird." (v. Berchtold).

226. *Copsychus musicus.*

Lanius musicus Raffl. Trans. Linn. Soc. XIII, p. 307 (1822).
Copsychus mindanensis Salvad. Ucc. Born. p. 254.
Copsychus musicus Sharpe, Cat. Birds Br. Mus. VII, p. 63; Everett, L. B. Born. p. 99; Sharpe, Ibis 1893, p. 384.

A fine series of adult and young birds of both sexes was collected at Pontianak, Smitau (Kapoeas R.), Nanga Raoen (Mandai R.), Poelau (Sibau R.) and on the Upper Mahakkam. — Iris dark brown, bill and feet black.

This is the only species of *Copsychus* I met with in Borneo. Along the Kapoeas and its tributaries it is a common bird in and round the native campongs, and we found it also very often in old ladangs (plantations) far off from any human habitation, and, when the water was getting low, on the exposed mud- and sandbanks along the rivers, searching for worms and insects. It is a very lively bird and an excellent singer. Its breeding time is about April, but as I was collecting that time in the Liang Koeboeng Mountains, where it is not found, I had no chance to procure its nest and eggs.

This species is spread over the whole Indo-Malayan region, being known from Siam and Malacca, Sumatra, Banka, Billiton, West-Java and Borneo. On this latter island it seems to be less generally distributed than its black-bellied congener *C. amoenus*, as it was hitherto only recorded from Sarawak (Salvadori, Everett). As to the distribution of the present species on the island of Java, a series of 26 specimens contained in the collection of Mr. Vorderman shows that it is exclusively restricted to Western Java as far as Cheribon, while *C. amoenus* is represented in the same collection by 22 specimens, all without exception from Eastern Java.

227. *Copsychus amoenus.*

Turdus amoenus Horsf. Trans. Linn. Soc. XIII, p. 147 (1822).
Copsychus amoenus Salvad. Ucc. Born. p. 255; Sharpe, Ibis 1889, p. 270; Everett, L. B. Born. p. 99.
Copsychus saularis (part.) Sharpe, Cat. B. Br. Mus. VII, p. 61.

A nearly adult male, still showing some gray feathers on breast and abdomen, and an adult female, both from the Upper Mahakkam (Nieuwenhuis). — Iris, bill and feet black. — Contents of stomach: insects.

Hab. East-Java [1]), Bali and Borneo, with the exception of Sarawak and the Kapuas-region.

Turdidae.

228. *Myiophoneus borneensis.*

Myiophoneus borneensis Slater, Ibis 1885, p. 123; Sharpe, Ibis 1887, p. 444; id. id. 1889, p. 269; Everett, L. B. Born. p. 98; Ch. Hose, Ibis 1893, p. 383; Sharpe, Ibis 1893, p. 550; id. id. 1894, p. 542.

A matched pair of this species (Nos 986 and 1091), belonging to the nest and eggs described below, were obtained near my station »Poenan-Grot", on the western slope of the Liang Koeboeng Mountain, on April 14th and 23d (the female caught on the nest) and a second female, also adult, in the same locality.

As Dr. Sharpe already pointed out (Ibis 1887, p. 444), the first description of this species, by Mr. Slater, is made after an immature bird with the white drops on the lower surface, which reminds much the corresponding parts in our European Nutcracker. Dr. Sharpe considers the present species to be nearly allied with *M. Blighi* from Ceylon, but it is wanting the blue shade of the latter on back and breast. As the learned author does not mention any further details about the plumage of the adult birds, it may be useful to give here a plain description.

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[1]) See the distribution of the previous species.

Adult male: General color sooty black, somewhat darker on the fore-parts above and below; these darker parts are, especially when viewed under a certain light, more or less strongly glossed with purplish blue, the hind margin of each feather being of that color; lesser wing-coverts glossy purplish blue, rest of the wing throughout sooty brown, outer under wing-coverts white at their larger basal half, thus forming a small white area which is preceded by some purple-shaded feathers. Feathers on back, rump, flanks, breast and abdomen pure white over nearly their basal half, this color decreasing in extent on mantle and chest, where it is reduced to mere white shaft-streaks, while it is entirely wanting on head, neck, throat, upper- and under tail-coverts and on the thighs. — Iris dark brown, bill and feet black. Wing 14,4 cm.; tail 8,2; tarsus 4,5; culmen 3,3.

Adult female: Similar to the adult male, but somewhat lighter and showing, over nearly the whole plumage, a hue of olive-brown when seen under a certain light; the purplish gloss is less obvious than in the male, the purplish blue shoulder-spot, however, hardly less strongly developed. It is also somewhat smaller than the male. The second female seems to be somewhat younger, being lighter brown and larger, its wings depassing in length those of the adult female.

A young male, to judge from its spotted plumage, is still browner and differs, moreover, from the adult birds in having drop-like white shaft-streaks on the sides of head and neck, on throat, chest, breast and abdomen and even on the under tail-coverts, the drop-like shape of these streaks being strongly visible on chest and breast, reminding our European Nutcracker. The under wing-coverts and the edge of the wing are almost entirely white. This specimen, collected by Schwaner in South Borneo and registered as a young male of *M. cyaneus* (Horsf.) is a little larger than the adult male.

This species was found near my above-mentioned station (784 m. above the level of the sea), at the foot of the high rocks which bear the top-plateau of the mountain and over which are dashing down a great number of waterfalls. Along the small rivulets fed by the waterfalls and running through the high forest which covers the slope of the mountain, the birds were found running up and down the rocky banks or frequenting the thick underwood, uttering some soft, melodious notes and scratching the ground and turning over dead leaves and other decaying matter in search for insects and small molluscs. In a narrow hole of the perpendicular rock near the station, about five feet from the ground, we found a nest of this species, and having shot the male, we a few days afterwards took the female, which had not stopped breeding, with nest and eggs during night-time. The nest forms a rather thick and solid construction of moss, and the cup is neatly lined with black rootlets and a few dead leaves, no mud being used in the whole nest. The length of the rather deep cup is 10, the width 8 cm., while the diameter of the whole nest is about 17. Directly behind this nest and even connected with it we found two empty and probably old ones of the same size and construction. The hole being rather narrow and deep, I only succeeded in getting the two foremost, which are now, together with the eggs, in the Leyden Museum.

The two eggs — I had in vain waited for more before capturing the female — are rather long, slender and conical, their color is white with numerous minute pale reddish punctulations, which are rather more concentrated round the thicker pole. Longer axis 4 cm., shorter 2,2.

From the fact that the two eggs already contained fairly developed young birds, and that during a weeks waiting no new eggs were laid, considering further that Charles

Hose found a nest of this species with two young birds only, we may fairly conclude that this is the full number of the eggs of a clutch.

Another (empty) nest belonging to this species, and of the same construction, I found very near the top-platform of the mountain, at an elevation of 1100 m., on a projecting boulder of a hugh rock, being protected from the rain by an overhanging part of the rock just above it.

From all we know from the few collectors who hitherto chanced to meet with this species, it must be considered a highland form, living along small mountain-streams in rocky territory. Mr. Whitehead is the first to tell us about its nesting in crevices of rocks (Ibis 1889, p. 269), while Mr. Hose found his above-mentioned nest placed on a tree-stump.

This species is, up to this date, known from North and North-west Borneo and the Liang Koeboeng. The above mentioned young bird from Southern Borneo in the Leyden Museum is hardly collected at Banjermasin as is mentioned on the label, but is most likely collected in the mountain-region during Schwaner's journey across the island from the mentioned place to Pontianak in West Borneo.

229. *Erithacus cyaneus.*

Motacilla cyanea Pallas, Reise Russ. Reichs, III, p. 697 (1766).
Erithacus cyaneus Everett, L. B. Born. p. 98; Sharpe, Ibis 1889, p. 268.
Erithacus cyaneus Hose, Ibis 1893, p. 383.

A small number of this species obtained on Mount Kenepai (550 m.) in January, and on the Liang Koeboeng (800 m.), March and April 2d. This very nice little bird is found in high forest as well as in low jungle, very quickly running along the ground in search for insects, especially white ants and their larvae.

This species breeds in Eastern Siberia and passes the winter months in more southern districts of the continent and in Borneo. On this island it is recorded from Labuan (Low), Kina Balu (Whitehead) and Baram District (Hose).

Motacillidae.

230. *Henicurus borneensis.*

Henicurus borneensis Sharpe, Ibis 1889, p. 277; Everett, L. B. Born. p. 100.

A small number of this species were collected on the western slope of the Liang Koeboeng, near my station »Poenan-grot'', at an altitude of 700—800 meter, and another at a less considerable height on the Liang Gagang (800 m.) south of Nanga Raoen. — Iris dark brown, bill black, feet (claws included) rosy white.

This Bornean representative of the genus *Henicurus* stands between the very closely allied *H. Leschenaulti* (Vieill.) from Java and *H. sinensis* Gould from China. From the first it differs by the shorter and posteriorly rounded white crown-patch, and from the latter by the narrower tail-feathers which are broadly tipped with white like in *H. Leschenaulti*, while in *H. sinensis* they show a rather narrow, oblique terminal bar. Curiously enough the reddish wash on upper and under tail-coverts, recorded by Dr. Sharpe in his diagnosis of the Bornean species, is entirely wanting in all my above-mentioned specimens, these parts being pure white.

A young female (nearly full-grown) has the top of the head uniformly colored with the back; chin and upper throat are white with a slight fulvous tinge, while chest and breast are sooty brown with white shaft-streaks.

As to the habits of this bird I have nothing to add to what is told by Mr. Charles Hose (Ibis 1889, p. 277).

Hab. Central, North-Western and Northern Borneo.

231. *Hydrocichla frontalis.*

Enicurus frontalis Blyth, Journ. As. Soc. Beng. XVI, p. 156 (1847).
Henicurus frontalis Salvad. Ucc. Born. p. 258.
Hydrocichla frontalis Sharpe, Ibis 1889, p. 278; Everett, L. B. Born. p. 100.

An adult female from Long Bloe, Upper Mahakkam. —

Iris brown, bill black, feet white. — Contents of stomach: insects.

Hab. Malay Peninsula and Borneo.

»Hält sich nur an den Quellbächen des Gebirgslandes auf und scheint das Flachland ganz zu meiden." (v. Berchtold).

232. *Hydrocichla ruficapilla.*

Enicurus ruficapillus Temm. Pl. Col. III, 534 (1832).
Hydrocichla ruficapilla Sharpe, Cat. B. Br. Mus. VII, p. 319; Everett, L. B. Born. p. 101.

Numerous specimens, amongst which a nestling (November 13th), from the Upper Mahakkam. — Iris brown, bill black, feet and claws white. — Contents of stomach: insects.

Hab. Malay Peninsula and Borneo.

»Im Gebiete des Kapoeas nie gesehen, doch im Gebiete des oberen Mahakkam kommt die Art überall vor. Sie hält sich mit Vorliebe an Waldbächen auf" (von Berchtold).

233. *Motacilla flava.*

Motacilla flava L. Syst. Nat. I, p. 331 (1760); Everett, L. B. Born. p. 102; Sharpe, Ibis 1889, p. 431.
Budytes viridis Salvad. Ucc. Born. p. 260.
Budytes cinereicapillus Salvad. Ucc. Born. p. 261.

Three specimens collected by Mr. Moret at Pontianak.

Hab. A usual winter-guest in the lowlands of Borneo.

234. *Motacilla melanope.*

Motacilla melanope Pall. Reise Russ. Reichs, III, App. p. 696 (1776); Sharpe, Cat. B. Br. Mus. X, p. 497; Everett, L. B. Born. p. 103; Sharpe, Ibis 1889, p. 430.
Calobates bistrigata Salvad. Ucc. Born. p. 259.

A male and four females (Dr. Nieuwenhuis, October 1898 to January 1899).

Hab. From Europe and Northern Asia through India to the Sunda Islands, where it passes the winter-months.

Ploceidae.

235. *Munia fuscans.*

Spermestes fuscans Cass. Proc. Phil. Acad. VI, p. 185 (1852).
Munia fuscans Sclat. P. Z. S. 1863, p. 219; Salvad. Ucc. Born. p. 268; Everett, L. B. Born. p. 142; Sharpe, Ibis 1889, p. 434.

Numerous specimens from Smitau, Mount Kenepai, Nanga Raoen and Poetoes Sibau, where it is a common bird in the »ladangs" of the natives. A male and a female from the Upper Mahakkam. — Iris and bill black, feet grayish blue.

Hab. Lowlands of Borneo.

236. *Munia brunneiceps.*

Munia brunneiceps Walden, Trans. Z. S. VIII, p. 73, pl. IX, fig. 1 (1872); Everett, L. B. Born. p. 142; Sharpe, Ibis 1889, p. 434.
Munia atricapilla Salvad. Ucc. Born. p. 265.

Four specimens from Pontianak and Smitau, and five specimens from the Upper Mahakkam. A common bird in the vicinity of human habitations and native rice-farms. — Iris black, bill grayish blue, feet black.

Hab. Borneo and Celebes (probably introduced in the latter island).

Sturnidae.

237. *Calornis chalybea.*

Turdus chalybeus Horsf. Trans. Linn. Soc. XIII, p. 148 (1822).
Calornis chalybea Salvad. Ucc. Born. p. 91; Everett, L. B. Born. p. 143; Sharpe, Ibis 1889, p. 432.

Four specimens from Pontianak. — Iris red, bill and feet black.

Hab. Malay Peninsula, Sumatra and Borneo.

238. *Gracula javanensis* 1).

Corvus javanensis Osbeck, Iter. p. 102 (1757).

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1) With regard to the validity of the generic name *Gracula* see Sclater, Ibis 1892, p. 461 (foot-note).

Gracula javanensis Salvad. Ucc. Born. p. 274; Sharpe, Ibis 1889, p. 132.
Eulabes javanensis Everett, L. B. Born. p. 144; Sharpe, Ibis 1889, p. 280.
Meinatus javanensis Sharpe, Cat. B. Br. Mus. XIII, p. 102.

Five specimens from Pontianak, Smitau, Roema Manoeal, Nanga Raoen, Poetoes Sibau and Poelau; also from the Upper Mahakkam. — Iris dark brown, eyelid alternately black and yellow, wattles orange yellow, bill coral-red with lemon-yellow tip, feet pale yellow. — Contents of stomach: soft fruits.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

Oriolidae.

239. *Oriolus xanthonotus.*

Oriolus xanthonotus Horsf. Tr. L. Soc. XIII, p. 153 (1822); Salvad. Ucc. Born. p. 277; Sharpe, Cat. B. Br. Mus. III, p. 213; id. Ibis 1889, p. 185; Everett, L. B. Born. p. 119.

Male and female obtained on Mount Liang Koeboeng, a female at Nanga Raoen, and three males and two females on the Upper Mahakkam. — Iris blood-red, bill brownish red, feet bluish gray, soles yellow.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

Corvidae.

240. *Platysmurus aterrimus.*

Glaucopis aterrimus Temm. Pl. Col. II, Livr. 57 (1825).
Platysmurus aterrimus Salvad. Ucc. Born. p. 279; Sharpe, Ibis 1889, p. 85; Everett, L. B. Born. p. 146.

Three specimens from Poetoes Sibau and Nanga Raoen; also from the Upper Mahakkam. Living in high forest. — Iris blood-red, bill black, feet grayish black.

Hab. Lowlands of Borneo.

241. *Platylophus coronatus.*

Lanius coronatus Raffl. Trans. Linn. Soc. XIII, p. 306 (1822).

Platylophus coronatus Salvad. Ucc. Born. p. 280; Sharpe, Ibis 1889, p. 190 (ranged under the family *Prionopidae*); Everett, L. B. Born. p. 147.
Garrulus rufulus Schleg. Handl. Dierk. I, p. 327; id. Mus. P.-B., Coraces, p. 66.

Eight specimens from the forests of Mount Liang Koeboeng and one from the Upper Mahakkam. — Iris dark brown, bill grayish black, feet light blue. — This is a sacred bird amongst the Bahau-tribe on the Upper Mahakkam.

Hab. Sumatra and Borneo.

242. *Corvus tenuirostris.*

Corvus tenuirostris Moore, Cat. B. Mus. E. I. Co. II, p. 558 (1858); Büttik. N. L. M. 1896, p. 185 (Birds from Nias [1]).
Corvus validus (nec Bp.) Schleg. Mus. P.-B., Coraces, p. 29; Salvad. Ucc. Born. p. 281; W. Blas. Verh. zool. bot. Ges. Wien, XXXIII, p. 63.
Corone tenuirostris Sharpe, P. Z. S. 1879, p. 246; id. Ibis 1889, p. 81; Everett, L. B. Born. p. 145.

Three specimens from Roema Manoeal, also from the Upper Mahakkam. — Iris, bill and feet black.

Hab. Malay Peninsula, Nias, Sumatra, Borneo and Timor.

Treronidae.

243. *Treron nipalensis.*

Toria nipalensis Hodgson, As. Res. XIX, p. 164 (1836).
Treron nipalensis Salvad. Cat. Birds Brit. Mus. XXI, p. 34.
Treron nasica Schleg. Ned. Tijdschr. Dierk. I, p. 67 (1863); Salvad. Ucc. Born. p. 283; Everett, L. B. Born. p. 196.

Five specimens from Smitau, Roema Manoeal and Mount Liang Koeboeng, and one from the Upper Mahakkam. — Iris golden orange, bare space round the eye pale green, bill yellowish green, base blood-red, feet blood-red.

Hab. From the south-eastern part of the continent through the Malay Peninsula to Sumatra, Banka, Borneo and the Philippines.

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[1] Containing annotations about this and the other species of Crows from the Malay Archipelago.

I feel obliged, after a close comparison of all the materials in the Leyden Museum, to unite *T. nasica* Schleg. with *T. nipalensis* Hodgs. When describing *T. nasica*, Schlegel was not acquainted with *T. nipalensis* Hodgs., and in his Catalogue of Columbae, p. 55, he declares that *T. nasica* seems to differ from *T. nipalensis* only by its smaller size, but comparing the sizes of both species as stated by Salvadori in the Catalogue of Birds mentioned above, I cannot find any noteworthy difference. Salvadori, in his Catalogue says that the Malayan birds are smaller and duller than those from Nepal and Tenasserim, but these differences do not hold well in the numerous specimens before me.

244. *Osmotreron vernans.*

Columba vernans Linn. Mant. Plant. p. 526 (1771).
Treron vernans Salvad. Ucc. Born. p. 286; Everett, L. B. Born. p. 196; Sharpe, Ibis 1890, p. 134.

Six specimens from Pontianak, Nanga Raoen, and Poelau. — Iris blue, encircled with pinkish rosy, bill horny blue, cere greenish yellow, feet purplish red.

Hab. South-eastern corner of Asia, the whole Malay Archipelago with Celebes, the Philippines and Sulu Islands.

245. *Osmotreron fulvicollis.*

Columba fulvicollis Wagl. Syst. Av. Columba, sp. 8 (1827).
Treron fulvicollis Salvad. Ucc. Born. p. 288; Everett, L. B. Born. p. 196; Sharpe, Ibis 1890, p. 134.

Two specimens from Smitau and Poelau. — Iris brown-red, outer ring pink, bill bluish green, cere coral-red, feet coral-red.

Hab. From Cochin China through the Malay Peninsula to Sumatra, Nias, Banka, Billiton and Borneo.

246. *Osmotreron olax.*

Columba olax Temm. Pl. Col. 241 (1823).

Treron olax Salvad. Ucc. Born. p. 289; Everett, L. B. Born. p. 196.

Eight specimens from Pontianak, Roema Manoeal, Nanga Raoen, Poelau and three from the Upper Mahakkam. — Iris white, outer ring purplish rosy, bill yellowish green, feet red. — Among the specimens from the Upper Mahakkam there is a fine adult male (December 19th 1896) in gray plumage, an aberration in color which is very uncommon among Trerons. It may be described as follows: crown, sides of head and the whole neck entirely gray; forehead, chin and centre of throat more whitish; back and shoulders entirely olive-yellow; rump, upper tail-coverts, wings and tail gray, tinged with olive-yellow; under wing-coverts gray, lower surface of the body normally colored, but the orange-brown of the chest paler, thighs and under tail-coverts gray, faintly washed with pale rufous.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

247. *Ptilopus jambu.*

Columba jambu Gm. Syst. Nat. II, 2, p. 784 (1788).
Ptilopus jambu Salvad. Ucc. Born. p. 289; Everett, L. B. Born. p. 197; Sharpe, Ibis 1890, p. 134.

Eight specimens from Roema Manoeal, Mount Liang Koeboeng, and Poelau. — Iris red, orbital skin gray, bill orange-yellow, feet purplish red.

Hab. Malay Peninsula, Sumatra, Banka and Borneo.

248. *Carpophăga aenea.*

Columba aenea Linn. Syst. Nat. I, p. 283 (1766).
Carpophaga aenea Salvad. Ucc. Born. p. 290; Everett, L. B. Born. p. 194; Sharpe, Ibis 1890, p. 134.

Numerous specimens from Roema Manoeal, Nanga Raoen, Poelau and Upper Mahakkam. — Iris brown, eyelid crimson, bill blue, cere crimson, feet pinkish.

Hab. South-eastern Asia with Ceylon and the Nicobars, Malay Archipelago to Flores, Sulu Islands and the Philippines.

249. *Carpophaga badia.*

Columba badia Raffl. Trans. Linn. Soc. XIII, p. 317 (1822).
Carpophaga badia Salvad. Ucc. Born. p. 291; Everett, L. B. Born. p. 195; Sharpe, Ibis 1890, p. 135.

An adult male from Long Bloe (Upper Mahakkam). — Iris white, base of bill purplish, tip whitish, feet red.

Hab. Malacca, Sumatra and Borneo [1]).

Columbidae.

250. *Turtur tigrinus.*

Columba tigrina Temm. & Knip, Fig. I, p. 43 (1808—11).
Spilopelia tigrina Salvad. Ucc. Born. p. 296.
Turtur tigrina Everett, L. B. Born. p. 193.

An adult male from Long Bloe (Upper Mahakkam). — Iris brown, inner ring pale yellow, bare space round the eye blood-red, feet red. — Contents of stomach: grass-seeds.

Hab. From South-eastern Asia through the Sunda Islands to the Moluccas.

251. *Macropygia ruficeps.*

Columba ruficeps Temm. Pl. col. 561 (1835).
Macropygia ruficeps Salvad. Ucc. Born. p. 298; Everett, L. B. Born. p. 193; Sharpe, Ibis 1890, p. 137.

Four specimens from Nanga Raoen and Mount Liang Koeboeng. — Iris silvery gray, bill black, feet reddish brown.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

252. *Macropygia emiliana.*

Macropygia emiliana Bp. Consp. II, p. 58 (1850); Everett, L. B. Born. p. 193; Sharpe, Ibis 1890, p. 137.

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1) Salvadori, Cat. Columbae in the British Museum, mentions Java as a doubtful habitat of this species. The Leyden Museum is in possession of three specimens ex coll. Van Lidth de Jeude with Java mentioned as habitat, but no collector being mentioned, we may not depend upon the trustworthiness of this fact. The species is wanting in Vorderman's collection of Javan birds.

A female from Long Bloe (Upper Mahakkam). — Iris brown, bill brown, feet red.

Hab. Java, Lombock and Borneo, where it has been found in the northern parts of the island only.

253. *Geopelia striata.*

Columba striata Linn. Syst. Nat. I, p. 282 (1766).
Geopelia striata Salvad. Ucc. Born. p. 298; Everett, L. B. Born. p. 194.

An adult specimen from Pontianak.

Hab. Malay Peninsula, entire Malay Archipelago and the Philippines.

Gouridae.

254. *Chalcophaps indica.*

Columba indica Linn. Syst. Nat. I, p. 284 (1766).
Chalcophaps indica Salvad. Ucc. Born. p. 299; Everett, L. B. Born. p. 194; Sharpe, Ibis 1890, p. 136.

Four specimens from Roema Manoeal and Poelau, and seven from the Upper Mahakkam. — Iris dark brown, bill coral-red with the basal part brown, feet red.

Hab. From South-eastern Asia, through the Malay Archipelago and the Moluccas to New Guinea.

Phasianidae.

255. *Argusianus Grayi.*

Argus Grayi Elliot, Ibis 1865, p. 423.
Argusianus Grayi Salvad. Ucc. Born. p. 305; Everett, L. B. Born. p. 197; Sharpe, Ibis 1890, p. 138.

Seven specimens from Mount Kenepai, Mount Liang Koeboeng and the Upper Mahakkam. — Iris brown, bare skin on face and throat purplish blue, feet coral-red.

Hab. Borneo, where it is an inhabitant of mountain-forests.

256. *Lobiophasis Bulweri.*

Lobiophasis Bulweri Sharpe, Ann. Mag. Nat. His. (4) XVI, p. 73 (1874); Everett, L. B. Born. p. 198.

Four males and four females from Mount Liang Koeboeng and from the Bruny River (Upper Mahakkam). — Iris red, bare skin on face and the wattles sky-blue, hind edging of the erect ear-wattles in the fully adult male black, consisting of a very short, brush-like covering of scale-like hairs, bill horny brown, lower mandible horny blue, feet coral-red.

This bird is, like the previous species, very shy and living very retired in the thickest mountain-forest. Two of the above mentioned females were caught in snares by my Dyak huntsmen, and the same is said in Mr. von Berchtold's annotations about the specimens obtained on the Upper Mahakkam. It is of interest that, while the occipital feathers in an adult male are steel-blue and rather short, they are, in another adult male with still more developed spurs and strongly developed testes (probably in the breeding-season) lengthened to a kind of crest, and reddish brown with black tips. This crested specimen has the wattles very strongly developed and, as mentioned above, the hind edge of the ear-wattles covered with a kind of brush-like hairs. As a rule, I suppose, the wattles will show the greatest development in the breeding season, the male with strongly developed testes and full plumage, obtained in December, has the wattles very long and broad, while in others showing signs of moulting and caught in October, have the wattles less fully developed. Besides the long ear- and baird-wattles, the adult males show a third pair of wattles, though very small, halfway between eye and nostril. All our fully adult specimens have chin and throat thinly covered with short black feathers. In adult males the spur is less strongly developed than in the genus *Lophura*, and not longer than 12 mm., while in the female the spur is only represented by a conspicuous knob. As to the number of tail-feathers, which is said by Sharpe to be thirty-two in the male and twenty-eight in the female, I can say that it is thirty in males and females. The outermost as well as the innermost tail-feathers are shorter than the neighbouring one, while the seventh or eighth pair are the longest. The longer upper tail-coverts in the adult male are pure white and rather long and nearly halfway covering the tail-feathers. The wings are strongly rounded, and the primaries are surpassing the secondaries by not more than 10—20 cm. in the male, while in the female they are nearly covered by the secondaries.

Hab. The more elevated regions of the interior of Borneo.

257. *Lophura nobilis.*

Euplocomus nobilis Sclat. P. Z. S. 1863, p. 119; Salvad. Ucc. Born. p. 306; Everett, L. B. Born. p. 199.
Lophura nobilis Büttik. N. L. M. 1895 (XVII), p. 175.

Two males and three females from Roema Manoeal and the Bruny River (Upper Mahakkam). — Iris red, naked skin of face and wattles blue, bill horny gray, base dirty reddish yellow; feet in the males horny white, each scale edged with red at the base; in the female the legs are yellow. — This species is an inhabitant of the thickest jungle and hardly ever seen by a huntsman. All our specimens, as most of the other galline birds obtained during the expedition, have been snared by the natives.

Hab. Banka and Borneo.

Rollulidae.

258. *Rollulus roulroul.*

Phasianus roulroul Scop. Del. Flor. et Faun. Insubr. II, p. 93 (1786).
Rollulus roulroul Salvad. Ucc. Born. p. 308; Everett, L. B. Born. p. 200; Sharpe, Ibis 1890, p. 140.

A great number of males and females obtained at Roema Manoeal, in the forests of Mount Kenepai and Liang Koeboeng, and on the Upper Mahakkam. — Iris brown, naked parts of the face blood-red, bill black, base blood-red, feet blood-red. In the female the red at the base of the bill is reduced to the angle of the mouth. — Most frequently found in bamboo-jungle.

Hab. Malay Peninsula, Sumatra, Java and Borneo.

259. *Melanoperdix nigra.*

Cryptonyx niger Vig. Zool. Journ. IV, p. 349 (1829).
Melanoperdix nigra Salvad. Ucc. Born. p. 309; Everett, L. B. Born. p. 199.

Numerous specimens of both sexes obtained at Roema Manoeal and on Mount Kenepai. — Iris dark brown, bill black, feet grayish blue. — This species inhabits brushwood and high bamboo-jungle.

Hab. Malay Peninsula, Sumatra and Borneo.

Perdicidae.

260. *Excalfactoria chinensis.*

Tetrao chinensis Linn. S. N. I, p. 277 (1766).
Excalfactoria chinensis Salvad. Ucc. Born. p. 311; Everett, L. B. Born. p. 200; Sharpe, Ibis 1890, p. 140.
Excalfactoria lineata Grant, Cat. B. Br. Mus. XXII, p. 253.

Five specimens from Pontianak, Sanggau and Mount Kenepai, and two from the Upper Mahakkam. — Iris red, bill black, feet yellow. — Plentiful in old and abandoned plantations.

Hab. India, South-east Asia, Malay Archipelago, the Philippines, Celebes and Australia.

Charadriidae.

261. *Charadrius dominicus.*

Charadrius dominicus P. L. S. Müll. Syst. Nat. Anh. p. 116 (1766); Sharpe, Cat. B. Br. Mus. XXIV, p. 195.
Charadrius fulvus Salvad. Ucc. Born. p. 313; Everett, L. B. Born. p. 204; Sharpe, Ibis 1890, p. 142.

Three specimens from Pontianak. — Iris brown, bill black, feet gray.

Hab. America and Asia, migrating as far as Australia.

Scolopacidae.

262. *Tringoides hypoleucos.*

Tringa hypoleucos Linn. Syst. Nat. I, p. 250 (1766).
Tringoides hypoleucos Salvad. Ucc. Born. p. 326; Everett, L. B. Born. p. 208; Sharpe, Ibis 1890, p. 144.

Six specimens from Pontianak and Smitau, and five from the Upper Mahakkam. — Common in winter along the rivers and on inundated fields. — Iris brown, bill and feet gray.

Hab. Old world as far south as Australia.

Rallidae.

263. *Rallina fasciata.*

Rallus fasciatus Raffl. Tr. Linn. Soc. XIII, p. 328 (1822).
Rallina fasciata Salvad. Ucc. Born. p. 337; Everett, L. B. Born. p. 201; Sharpe, Ibis 1890, p. 145.

A specimen from Pontianak and another from the Upper Mahakkam. — Iris red, bill grayish horn-color, feet coral-red.

Hab. From Burma through the Malay Peninsula, the Sunda Islands, Celebes and the Moluccas.

264. *Amaurornis phoenicura.*

Rallus phoenicurus Forster, Zool. Ind. p. 19, pl. 9 (1781).
Erythra phoenicura Salvad. Ucc. Born. p. 340; Everett, L. B. Born. p. 302; Sharpe, Ibis 1890, p. 145.
Amaurornis phoenicura Sharpe, Cat. B. Br. Mus. XXIII, p. 156.

One specimen from Smitau. — Iris reddish brown, bill green, base of upper mandible red, feet greenish yellow.

Hab. South-eastern Asia, the Sunda Islands and Celebes.

Ardeidae.

265. *Ardea sumatrana.*

Ardea sumatrana Raffl. Trans. Linn. Soc. XIII, p. 325 (1821); Salvad. Ucc. Born. p. 344; Everett, L. B. Born. p. 188; Sharpe, Ibis 1890, p. 146.

Repeatedly met with on the banks of the Kapoeas River below Poetoes Sibau. No specimens collected.

Hab. From British India through the Malay Archipelago to Australia.

266. *Bubulcus coromandus.*

Cancroma coromanda Bodd. Tabl. Pl. Enl. p. 54 (1783).
Bubulcus coromandus Salvad. Ucc. Born. p. 350; Everett, L. B. Born. p. 189; Sharpe, Ibis 1890, p. 146.

An adult, pure white female from the Bruny River (Upper Mahakkam); not collected, though rather common, on the Upper Kapoeas. — Iris sulphur-yellow, surrounded with a white ring, bill and bare parts of the face lemon-yellow, feet ashy gray yielding to olive-green. — Contents of stomach: small fish and apparently a number of leeches.

Hab. From India and Ceylon throughout South-eastern Asia and the Malay Archipelago.

267. *Ardetta sinensis.*

Ardea sinensis Gm. Syst. Nat. I, p. 642 (1788).
Ardetta sinensis Salvad. Ucc. Born. p. 354; Everett, L. B. Born. p. 190; Sharpe, Ibis 1890, p. 148.

An adult female from Pontianak (Moret). — Iris yellow, bill yellow with the culmen black, feet greenish yellow.

Hab. From Eastern and South-eastern Asia through the Malay Archipelago and the Philippines to Celebes and Flores.

268. *Ardetta cinnamomea.*

Ardea cinnamomea Gm. Syst. Nat. I, p. 643 (1788).

Ardetta cinnamomea Salvad. Ucc. Born. p. 354; Everett, L. B. Born. p. 190; Sharpe, Ibis 1890, p. 147.

A male collected at Pontianak (Moret) and two females from the Upper and Lower Mahakkam. — Iris yellow, bill lemon-yellow, ridge black, feet dirty olive-green.

Hab. From India and Ceylon through Burmah and the Malay Peninsula to the Sunda Islands and the Philippines.

Ciconiidae.

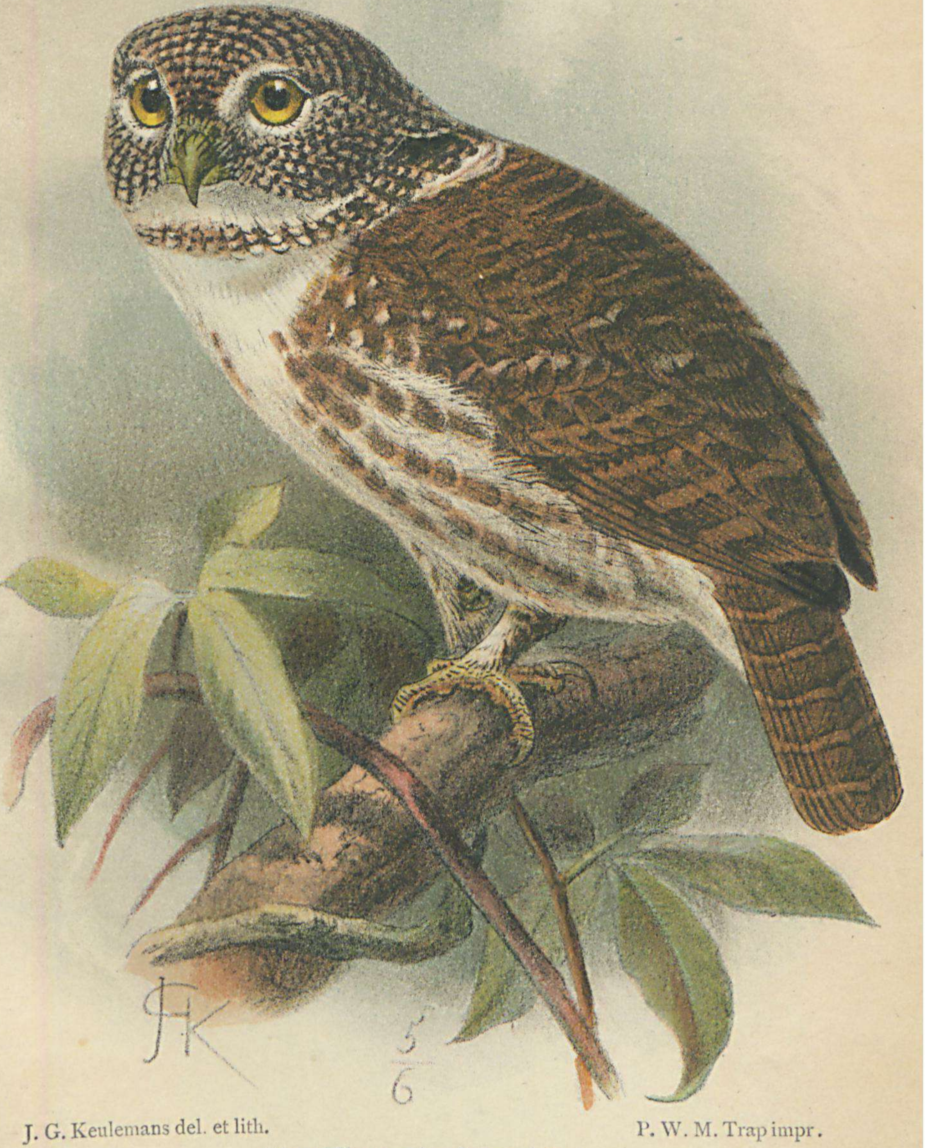
269. *Melanopelargus episcopus.*

Ardea episcopus Bodd. Tabl. Pl. Enl. p. 54 (1783).
Melanopelargus episcopus Salvad. Ucc. Born. p. 356; Everett, L. B. Born. p. 191.

An adult male obtained near Poetoes Sibau by Dr. Nieuwenhuis. — Iris pale yellow with an outer ring brown, bare skin round the eyes and on the throat Naples-yellow, bill dark red, feet Sienna-yellow. — Contents of stomach: earthworms of a species which is very plentiful in the mud of the river-banks. — This bird is not rare on the banks of the Kapoeas, but it is rather shy and not easily got within gun-shot. Some five specimens together used to pass the night on high trees dominating the low forest on the Sibau River.

Hab. Africa, Southern Asia and the Sunda Islands.

Rotterdam, September 1899.



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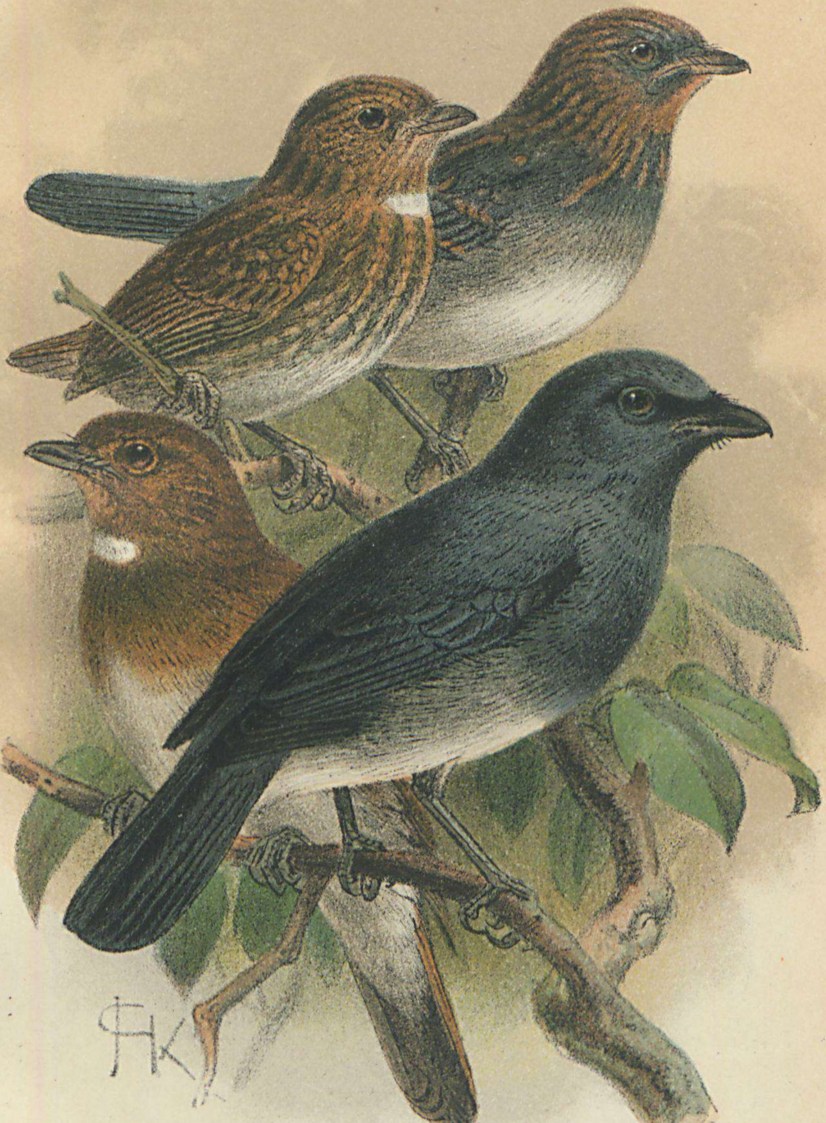
J. G. Keulemans del. et lith. P. W. M. Trap impr.

Glaucidium sylvaticum (*Bp.*)



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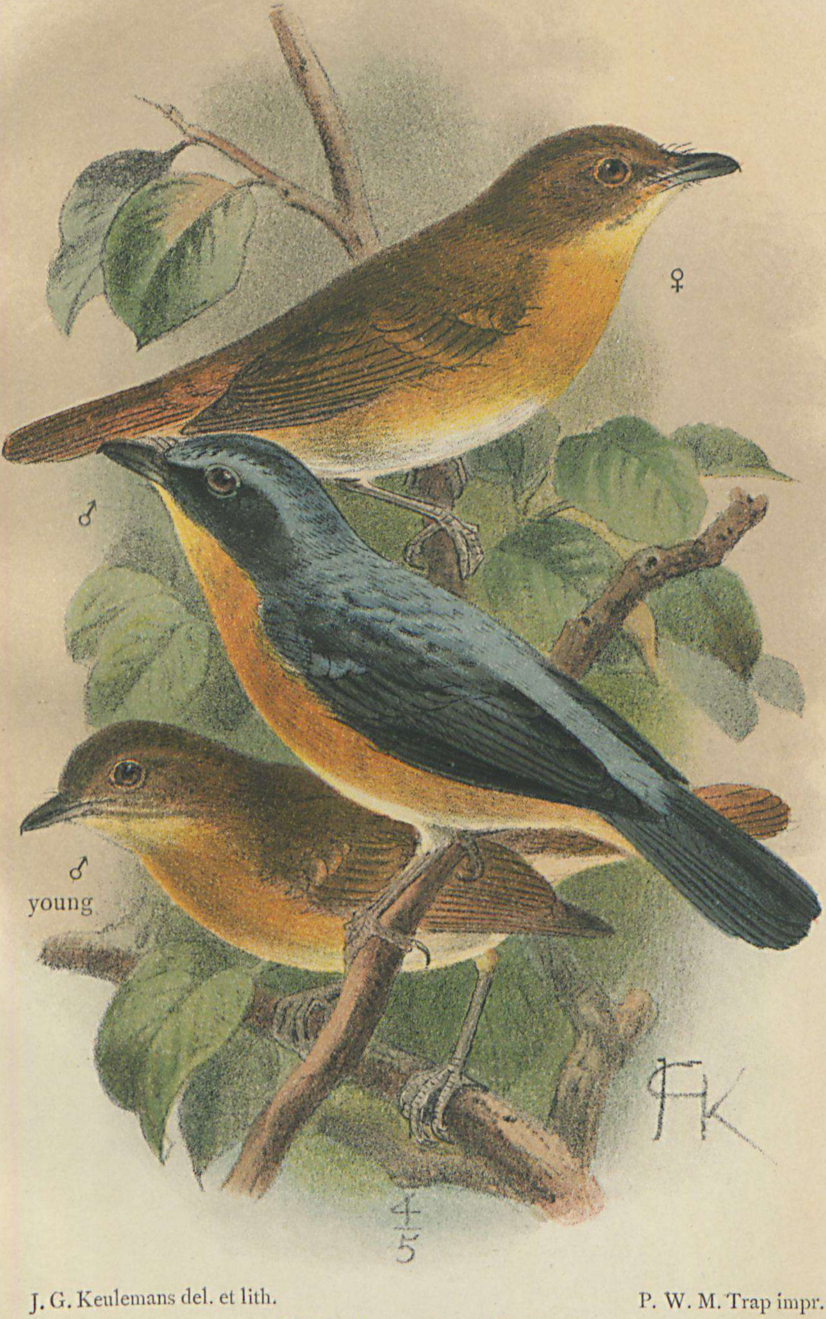
Siphia Everetti *Sharpe*.


♀
♂
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young
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J. G. Keulemans del. et lith. P. W. M. Trap impr.

Siphia beccariana (*Salvad.*)